

Nature Edition

# Curious by Nature

**Welcome to YOUR adventure.**

Why isn't this just another field trip or day at the park?

**This fox.**

It's the start of a journey like no other.

**Welcome to the wonder of nature.**

Let's get started!



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada

Canada

Stop for a moment. Look around,  
breathe deeply, and listen.

## This place is extraordinary.

It's not just the Instagram ready scenery. What makes this place truly unique is the home it offers to insects, plants, animals, birds—and the red fox.

Adaptable, smart, and found almost everywhere across our country, the red fox knows this land—and its overlooked stories—better than anyone.

So, who better to guide us than one fantastic fox with a remarkable story that just might change the way you see this special place.

What  
To  
Bring:



### Be a Good Guest in Nature

Just as we want to keep our homes clean and safe, we want to be sure to treat this home the same way.

- Wear appropriate clothing and bring water, snacks and sunscreen.
- Always stay together with your group and never wander off alone.
- Stay on trails and be gentle with plants and trees.
- Keep a safe distance from animals, and never chase them.
- DO NOT feed wildlife as this can harm them and change their natural behaviour.
- Use quiet voices and calm movements to respect wildlife.
- Don't take anything from the wild, and don't leave any trash behind.



**Red Fox  
Stats**  
Character  
Profile

**Name** | Red Fox (*Vulpes vulpes*)

**Diet** | Omnivore

**Weight** | Average 3.5-7 kg

**Size** | Height at Shoulder | 35-50 cm

**Size** | Body Length | 55-90 cm

**Lifespan** | 4 years  up to 12 years

**Special moves** | Silent stalking, quick pounces

**Diverse diet** | Rabbits, rodents, fruits, insects

**Family teamwork** | Helpers from previous litters assist with raising kits



Find a quiet spot and spend 3-5 minutes observing this place.  
What do you see, hear or smell?



**Awaken  
Your  
Senses**

See

Hear

Smell

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Maybe you think you know everything about foxes. Think again.

The Canadian red fox has two origins: one group walked across a frozen land bridge from Asia long ago, while another arrived aboard ships with early settlers.

## That's interesting, but this is even more so:

Indigenous cultures have long honoured the fox, seen sometimes as a wise trickster or a guardian of knowledge—a symbol of clever survival and adaptability. Through their teachings—and by learning to listen to the land and its stories—we can learn more about this place and how to co-exist with nature.

In Canada, humans and foxes often choose similar places to live—near water, with abundant food and supplies for shelter. Living as neighbours for thousands of years, Indigenous Peoples learned from foxes, understanding their habits, stories and signs. This created a special relationship based on respect, knowledge and connection.

For countless generations, Indigenous Peoples have lived alongside the fox, learning from its life on the land. Create something to honour this connection by writing a short poem inspired by what you see.



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**Whose Territory is This?**

What Indigenous territory are you on?

Take some time to acknowledge the presence of different Indigenous communities both past and present.

### Interesting fact!

All across Canada, Indigenous Peoples are helping to protect important natural areas, called Indigenous Protected and Conserved Areas. These areas keep the land, water, plants and animals protected from activities that could harm or displace them.



**Dene:**  
nqǫ́dhe

**Inuktitut:**  
terianniaq

**Haida - Xaad Kíl:**  
t'áaw

**Innu:**  
matsheshu

**Cree:**  
mahkésis

**Atikamekw:**  
wakoc

**Anishinaabe:**  
waagosh

**Kanien'kéha:**  
tsitsho

**Mi'kmaq:**  
wowkwis

# Where does our fox's story begin? At HOME, of course. In fact, all of our stories start at home.

Home gives us our place in the world. It's shelter. It's safety. Without a home, it's hard to survive. But with one, almost anything is possible.

For our fox to live out her story, first she needed to begin her story—born in a cozy den, in a place just like this.

Like this? Like where?!

Well, to find where a fox might den **here**, you don't need to think like a fox—you just need to think like you! After all, **what a fox looks for in a home and what we look for in a home aren't that different.**



### Habitat

The specific features that make a place home to a plant or an animal—like our red fox!

### Ecosystem

All living things and their environment working together in a certain place—like where you are now!

### Ecoregion

A big natural area with similar ecosystems and plants and animals—like Canada's boreal forest!



**As cities grow, animal homes like those of foxes can disappear—this is called displacement. Luckily, many Canadian cities protect natural areas right inside the city—they're places where people, plants and animals can live together.**



At the forest's edge, our female fox—called a vixen—was born alongside three energetic siblings, where games taught her the art of survival.

As the days grew shorter, she knew it was time to find a home of her own. Instead of relying on strength or speed, she used her sharp senses to find her way in the world.

Like our fox, we can use our senses to see why this place is the perfect home for life, big and small.

### Rank Your Senses

Use your five senses to explore your surroundings. Which of your senses feels the strongest? Rank them from 1 (weakest) to 5 (strongest).

Rank #

What did you notice with this sense?

How does it help in your daily life?



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#



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\*Only taste something you are sure is safe.



Our fox, like all foxes, has amazing hearing—amongst the best in the animal world! With large, alert ears, it can hear a mouse's tiny footsteps from 100 metres away, and even the distant flap of an eagle's wings! Foxes sense tiny vibrations through their paws—as if they're feeling sound—helping them stay safe and find food even if they can't see or smell.



### Listen Closely

Close your eyes and listen carefully for 2-3 minutes. Write down three distinct sounds you hear and where they might be coming from.

From Nature

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From Humans

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Now, **CIRCLE** the sounds you think a fox might not enjoy hearing.

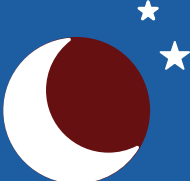


**GREAT HEARING**  
Great Grey Owl



**WEAKER HEARING**  
Western Painted Turtle





Can our fox see in low light? Absolutely! Foxes have eyes like cats, with slit pupils and special “rod cells” that help them spot movement in the dark. A shiny layer behind their retina reflects light, making their night vision even stronger—and giving their eyes an eerie glow at night!



Our fox doesn't just hear and see well—she has an incredible sense of smell too! With over 200 million scent receptors, her nose is a powerful tool for hunting, sensing danger and “talking” to other foxes. They leave messages with strong-smelling urine—so strong it's often confused with a skunk!



**GREAT VISION**  
Lynx



**WEAKER VISION**  
Northern Pocket Gopher



**Nature Colour Hunt**

Look carefully around you—what colours can you find in nature? Move a little. Look up, down, and all around! Write what you notice for each colour.

- Red** \_\_\_\_\_
- Orange** \_\_\_\_\_
- Yellow** \_\_\_\_\_
- Green** \_\_\_\_\_
- Blue** \_\_\_\_\_
- White** \_\_\_\_\_
- Brown** \_\_\_\_\_



**GREAT SMELL**  
Chinook Salmon



**WEAKER SMELL**  
Bald Eagle



**BEST SMELLING**  
Fisher



**WORST SMELLING**  
Grizzly Bear



**A Nose for Nature**

Find two things around you to smell—like a tree, a flower, grass or soil, and describe the scent (earthy, sweet, fresh).

**What do you smell?**

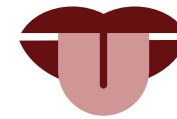
**Describe the scent**

\_\_\_\_\_

\_\_\_\_\_



Those wispy hairs on our fox's nose? They're whiskers! Foxes use their whiskers—not only on their face, but also on their legs—to explore the dark. Like otters and cats, their sense of touch helps them find food and avoid danger when sight and hearing aren't enough.



So, what can't our fox do well? Taste! Foxes have **one-ninth the taste buds of humans,**



and fewer than many animals around them. It means they don't truly savour flavours—imagine never being able to enjoy sweet treats!



### Feel the Forest

Use your sense of touch to explore the textures around you. **Find two different trees** and feel their bark—is it rough, smooth, flaky or grooved?

Now, use the space provided to **draw the outline** of the different tree barks you explored.

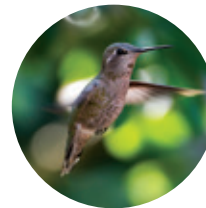
How are the textures of the trees different? And why might each bark type help the tree survive in its environment?



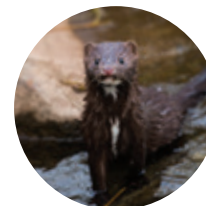

**GREAT TOUCH**  
River Otter



**WEAKER TOUCH**  
Common Garter Snake



**GREAT TASTE**  
Rufous Hummingbird



**WEAKER TASTE**  
American Mink



### Nature's Flavours

Find a flowering plant and observe it for five minutes. Count how many pollinators visit—like bees, butterflies, beetles or hummingbirds—and notice which types are most frequent and how they interact with the flower.

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#### Fun Fact

About one out of every three bites of food we eat depends on pollinators like bees and butterflies!



Our fox has an impressive set of senses, but she might also have a “sixth sense” for finding her way—even when she can’t rely on sight, sound, smell or touch. It’s like having a built-in GPS!

#### Navigational Sense in Action

##### Memory mapping

Foxes remember where they buried food or found shelter.

##### Magnetic compass

They sense the Earth’s magnetic field, using it as a compass.

##### Senses in sync

By combining all senses, foxes can travel and hunt without getting lost.



### Do people have a “sixth sense”?

Many Indigenous Peoples speak of a “sixth sense” as well. It’s not magic, but a way of knowing rooted in a deep connection to land and the life that calls it home. Indigenous Knowledge teaches us to slow down and truly experience nature with all our senses, offering insights that western science alone can’t always explain.

Each Indigenous nation shares unique stories and teachings about this special way of sensing the world. By blending Indigenous Knowledge with western science, we gain a fuller, richer understanding of our natural world—what’s called “two-eyed seeing.”

Foxes excel at four out of five senses and have a remarkable “sixth sense” for navigation. But they also have an evolutionary **SUPERPOWER!** Over thousands of years, foxes have developed a special toe called a **dew claw**. It’s found just above their other toes and acts like a ski pole, giving them extra grip on slippery ground. This toolkit helps foxes plant seeds and control rodents, making them a true super-species that helps the whole ecosystem—including us!



dew claw



#### Four Fox Facts

##### Foxes Can Talk

From barks to screams, foxes use over 40 different sounds to communicate. They even use facial expressions to convey their message!

##### Foxes Help People

Foxes keep farms and neighbourhoods healthy by hunting mice and rats which, in turn, helps people by stopping the spread of deadly diseases.

##### Foxes Value Teamwork

Sometimes, a daughter from a previous litter stays with the family for another year, helping care for her younger siblings.

##### Foxes Can Jump

A fox’s high pounce lets it surprise prey hiding under snow or grass, helping it catch animals that others might miss.



Nature works together to help species like the fox thrive—even when they never meet! For example, when our vixen chose her home, it was because wolves lived nearby.

## You see, foxes and wolves are accidental partners in what's known as the food chain.

Wolves don't mind foxes—they go after different prey—but really don't like coyotes. Since coyotes compete with foxes, when wolves are around, they keep the coyote population in check.

This unexpected and unique partnership shows how every species plays a role in making nature work just right!




**Coyote & Badger**  
Coyotes chase prey above ground while badgers flush them out from below—and both take turns eating the food!

### Surprising Species Partnerships



**Magpie & Bison**  
Magpies eat insects that bison disturb as they move and use tufts of bison hair for nesting, while bison get cooler and have fewer bugs thanks to magpies.

Before the leaves changed colour, our fox found her new home. And as the land turned from brown to snowy white, she explored her territory—forests, wetlands and meadows dotted with a few roads and houses.

She soon realized she didn't want to live here alone. Eventually, she found a young male fox to start a family with. Together, they chose a den beneath tall trees and near fallen logs, and just as spring arrived, their seven kits were born.



### The Seasons of a Fox: How Weather Shapes Life



**Spring**

Foxes become more active after winter, hunting to feed their kits. They shed their thick winter coat and explore more as food becomes abundant.



**Summer**

Foxes raise their young, hunting mainly small mammals and insects. Their fur is lighter and shorter to keep cool.



**Fall**

Foxes grow a thick new winter coat with rich colours to prepare for colder weather. They start storing food and marking territories.



**Winter**

Foxes rely on their dense fur and keen senses to find scarce food. Their movements are often quieter and more calculated to conserve energy in the cold.



### Camouflage Challenge

Find a quiet spot outdoors and imagine you're a small animal trying to hide from predators. Look around—where would you go to blend in? If you were green, where could you hide? What about brown, red or yellow?



Our fox and her mate had seven hungry kits to feed—but finding enough food wasn't easy.

While foxes adapt well, many of the animals they depend on—like rodents or birds and even the Eastern wolf—are more sensitive to environmental changes. When these species disappear, it puts the whole food web at risk.

As the woodland vole's population declined, the male fox—also called a dog fox—had to travel farther, often crossing busy roads. One day he was hit by a car.



Foxes mate for life, and when our vixen's mate failed to return home, she was left alone to care for her kits and hunt for the food they needed to survive.

### And she simply couldn't do both on her own...

You might think this is a sad story—another tale of environmental loss—but it's not. Remember, our fox is remarkable!

Knowing she couldn't raise her kits alone or easily find another mate, our vixen went looking for help. She found her sister nearby, also raising kits alone after losing her mate as well.

### What happened next was amazing!

The two vixens teamed up, bringing their families together in one den. Thirteen kits, born at different times in the spring, played and learned side-by-side. The two mothers shared nursing and hunting duties, caring for all the young and building extra dens to keep everyone healthy.



Each kit had their needs met—milk for the youngest, bigger prey for the oldest. The clever vixens even distracted the bigger, hungrier kits with treats like snowshoe hare.

### As spring turned to summer, what could have been a story of struggle and sadness became one of hope and teamwork.

#### Canada's Species at Risk Act & Why Species Are in Decline

Biodiversity loss happens when things like habitat loss or fragmentation, pollution, invasive species, exploitation of wildlife and climate change impact the lives of species. And right now? Our world is losing species at a rapid rate. Canada's *Species at Risk Act* (SARA) works to stop the decline, helping protect animals and plants that are in trouble by protecting their homes and helping populations grow. To learn more about SARA visit:



#### What's Missing

Take a good look around. What plants, bugs, birds, or animals can you see?

##### What's missing?

What animals used to live here 100 years ago and are now missing?

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##### What can you do?

What could you or others do to help keep this place healthy?

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#### Nature's Hope

Search carefully for signs that nature is healing or adapting. Perhaps you can find a plant growing through the cracks of a rock or new shoots on a broken tree branch. What does this tell you about nature's ability to survive and adapt?

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Canada has  
• **19 biosphere reserves** where communities, scientists and Indigenous Peoples work together to keep nature healthy. These special places show how working together can help protect animals, plants and even people. These reserves also help us adapt to climate change.

How does our fox's story end? When the seasons changed, all 13 kits not only survived—they thrived! They beat the odds and, grown and healthy, each set off to create their own stories.

And our vixen? She set out to see what the future might hold.

This is the wonder of life: every creature, **including us**, shapes the world in ways big and small—every single day. And when we choose to better our world, **anything and everything is possible**.

By stopping to appreciate **this** place, you've started to uncover its stories—like the fox who was determined to save her family, helping all life in the process.

These stories matter. Why? **Because they also remind us that we have a story.**

Time to find yours and share it with the world: **Your time is now!**



Check out the Curious By Nature learning hub for more fun info at

[naturelabs.ca/curious-by-nature](https://naturelabs.ca/curious-by-nature)



## What's Next?

Because you matter and what you do matters, consider doing your part to help people and nature in a place like this.

### Join the **Protect Nature Challenge!**

**Protect birds** | Make windows safer for birds by adding patterns with markers or decals so they can see and avoid them. Help birds even more by wasting less food, using less plastic and cleaning bird feeders regularly.

**Protect biodiversity from home** | Grow native wild plants, skip chemicals, compost and keep cats inside to help local wildlife.

**Support protected areas** | Visit, respect, volunteer at and speak up for protected natural areas, helping both people and nature.

### Learn more about **National Wildlife Areas (NWA) in Canada**

Canada's National Wildlife Areas protect important habitats for migratory birds and wildlife, including species at risk across Canada. They protect biodiversity and healthy ecosystems from human activities for current and future generations.





## It's time for a Scavenger Hunt!

Explore your surroundings and see how many of the items on the list you can find. Stay curious and enjoy discovering the hidden wonders around you.



### Tips

Choose a spot to explore safely.

Look closely at your surroundings to discover plants, animals and insects.

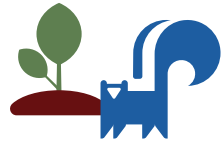
Use your senses as you did before to observe what you see, hear, smell and feel.

Note any interesting finds or behaviours.

Don't disturb or remove any wild creatures or vegetation, including nests and eggs.



- Find something orange.
- Find a rock with an interesting shape or pattern.
- Spot three birds and/or listen for three types of singing.
- Discover something soft or fuzzy.
- Find something that smells strong or sweet.
- Find something that floats in water.
- Discover an insect or a small creature.
- Find something shiny or reflective.
- Find something that inspires curiosity.
- Spot something red.
- Find a plant with tiny flowers. (Bonus if there is a pollinator on it!)
- Listen for the sound of running water (stream, puddle, or drip).
- Discover something shaped like a circle.
- Find evidence of five animals (tracks, feathers, scat).
- Find something that looks like it's been influenced by humans (path, garbage, etc.).
- Spot something with stripes or spots.
- Find something shaped like a letter of the alphabet.
- Spot a bird's nest or insect home. Be careful, do not get too close or touch it.
- Spot something very small—smaller than your thumb.
- Find something with a strong colour contrast (light vs. dark, bright vs. dull).



Use [iNaturalist.ca](https://www.inaturalist.ca) to help with species identification and to report sightings to help scientists.

