



NATURE ACTIVITIES

WITH BC CURRICULUM LINKS

WINTER

PART 2 OF 3 SEASONS



With great respect and humility, we acknowledge and honour the lands of the Stz'uminus and Snuneymuxw peoples on whose territories Wildwood Ecoforest is situated. The Stz'uminus and Snuneymuxw peoples maintain their profound, unique and spiritual connection to the land through ageless traditions, teachings, stewardship and expressions of reciprocity.

Huy ch'q'a

These activity pages have been created by the Ecoforestry Institute Society based on seasonal patterns at Wildwood Ecoforest. They are intended for free use by anyone who wishes to connect with the land.

Several of the journal pages have short educational videos to go with them. These videos can be found on our YouTube Channel. Search for Ecoforestry Institute Society on YouTube and look for our When in Doubt, Go Out(side)! playlist.

This project was made possible by the TD Friends of the Environment Fund, the BC Community Gaming Grant, and NSERC (PromoScience)



Winter (January - early March)

When done outdoors, all of our activities support the following Curricular Competencies in the BC Science Curriculum:

K - 8 Experience and interpret the local environment

K - 8 Express and reflect on personal (or shared) experiences of place

K - 6 Observe / Make observations in familiar (or unfamiliar) contexts

K - 4 Demonstrate curiosity (and a sense of wonder) about the (natural) world

Additional curriculum links for specific activities are listed below.

A Natural Calendar

Science:

K - Plants and animals have observable features; daily and seasonal changes affect all living things

1 - Living things have observable features that help them survive in their environment; observable patterns and cycles occur in the local landscape

3-4: Make observations of living and non-living things in the local environment

7-8 - Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest; Make observations aimed at identifying their own questions about the natural world

Deer Ears

Science:

K - Living things have observable features

1 - Living things have features and behaviours that help them survive in their environment

4 - All living things sense and respond to their environment

Physical Education:

(Note: 'Predators' are experimenting with movement to sneak up on prey)

K-2 - Develop and demonstrate a variety of fundamental movement skills in a variety of physical activities and environments

3-4 - Apply a variety of movement concepts and strategies in different physical activities

Evergreen Leaf Hunt

Science:

K - Plants and animals have observable features

1-2 Names of local plants and animals, structural features of living things in the local environment

3-4 Living things are diverse, can be grouped, and interact in their ecosystems; biodiversity in the local environment, make observations of living and non-living things in the local environment

Who Am I and What Am I Doing In Winter?

Science:

K - Plants and animals have observable features

1-2 Names of local plants and animals

3-4 Biodiversity in the local environment

Continued ...

Continued...

Evergreen Cone Hunt

Science:

K - Plants and animals have observable features

1-2 Names of local plants and animals, structural features of living things in the local environment

3-4 Living things are diverse, can be grouped, and interact in their ecosystems; biodiversity in the local environment

Snowy Animal Tracks

Science:

K - Make exploratory observations using the senses

3-4: Make observations of living and non-living things in the local environment

Physical Education:

K-2 - Develop and demonstrate a variety of fundamental movement skills in a variety of physical activities and environments

K-4 - Participate daily in physical activity at moderate to vigorous intensity levels

Winter Sensory Warm Up

Science:

K - Make exploratory observations using the senses

3-4 - Make observations of living and non-living things in the local environment

Who's Hooting?

Science:

K - Plants and animals have observable features

1-2 Names of local plants and animals, structural features of living things in the local environment

3-4 Living things are diverse, can be grouped, and interact in their ecosystems; biodiversity in the local environment

Tree Rings

Math:

K- 2: Objects have attributes that can be described, measured, and compared; repeating patterns; number concepts to 100

3: Measurement using standard units

Science:

K - Plants and animals have observable features

1 - structural features of living things in the local environment

3-4: Make observations of living and non-living things in the local environment

Winter (January - early March)

1. A Natural Calendar
2. Deer Ears
3. Evergreen Leaf Hunt
4. Who Am I and What Am I Doing In Winter?
5. Evergreen Cone Hunt
6. Snowy Animal Tracks
7. Winter Sensory Warm Up
8. Who's Hooting?
9. Tree Rings



A Natural Calendar

Date: _____

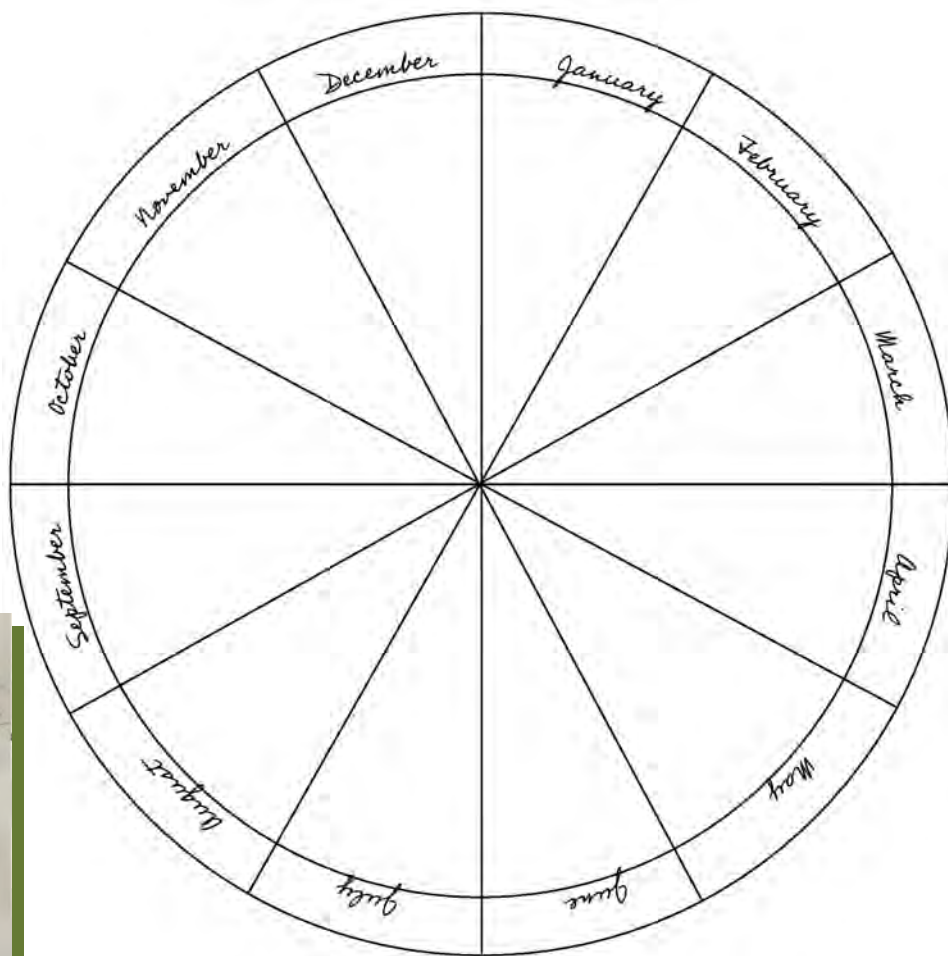
Have you ever heard someone say "winter came early this year" and wondered how they know this? Do you look for signs of spring on cold winter days? If you have, you might be interested in phenology. (It's pronounced "fee-nah-luh-jee" - try it!)

Phenology is a way of studying nature that focuses on plant or animal life cycles and how they are connected to seasons and climate. This might sound complicated, but being a phenologist can be as simple as keeping track of just one tree or plant in your yard. The trick is to keep track of your chosen plant for a long time. Can you keep track of a plant in your yard for a whole year?

Choose a plant or tree in your yard. This project will be more interesting if you choose a plant that has visible flowers, fruits, or seeds, and loses its leaves in the wintertime. On Vancouver Island, an excellent choice would be a Bigleaf Maple tree, a Red Huckleberry bush, or a fruit tree.

Observe your plant carefully. Pay special attention to its leaves, flowers, fruits, seeds, and buds. Draw a detailed picture of it in the appropriate section of the circle. Then, next month, visit your tree or plant again and repeat the process. What changes do you notice? Include all of these details in your drawing.

Can you do one drawing a month for a whole year? If you do, you will end up with a beautiful illustration of a year in the life of your favorite plant.



WINTER - WEEK 1

"To reconnect with nature is key if we want to save the planet."
- Jane Goodall

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Deer Ears

Date: _____

Perk up your ears and listen carefully, because a predator may be near! Can you hear approaching danger as well as a deer can? You'll need at least two people for this activity.

Many animals use their sense of hearing to notice danger or find prey. Deer and rabbits have large ears that help them gather sounds that might alert them that an owl or cougar is near. Owls, meanwhile, have special wing feathers that help them fly silently. Cougars are experts at waiting patiently and moving quietly so that their prey won't hear them.

Being able to hear other animals nearby can be a matter of life and death for many animals in the winter. Try this game to practice stalking prey silently like a predator and listening carefully like a prey animal. You can play this game indoors or outdoors. You'll need a large space without a lot of obstacles. Pick one person to be the prey, and one to be the predator. Use a small object like a stone or a stick to represent the prey animal's life.

The 'prey' should place the stick or stone in front of them and then close their eyes. The 'predator' starts several meters away from the prey animal. Once the 'prey' has closed their eyes, the 'predator' should move as quietly as possible, like a silent-flying owl or a stealthy cougar, towards the stick/rock. The goal is to try to take the item and return to the start without being heard by the 'prey'.

If the 'prey' thinks they hear the 'predator' approaching, they should point at them. If they are correct, then the predator must return to the start. In the wild, a prey animal cannot waste energy running away from every sound. Consequently, each person is only allowed to point three times during their turn as prey.

After a few rounds, have the 'prey' place their hands like cups behind their ears. This simulates a large ear like a deer or a rabbit. Ask the 'prey' if this helps them hear the 'predator' better.

Make sure to switch places so that each person gets a turn as both the 'prey' and the 'predator'.

Note for adults: If you are trying this game with a larger group, here are some tips:

1) To make this game covid-friendly, place the item 2m in front of the 'prey'. To avoid touching common surfaces, use an item like a pen or pencil belonging to the 'predator' and have them place it in front of the 'prey' so that they are collecting their own item.

2) With large groups, people waiting their turn should be as quiet as possible. This can be difficult, so try setting the game up so that the 'audience' is off to one side of the 'prey' rather than facing them as this will make extra voices less distracting.

EXTRA COLOURING on the next page!



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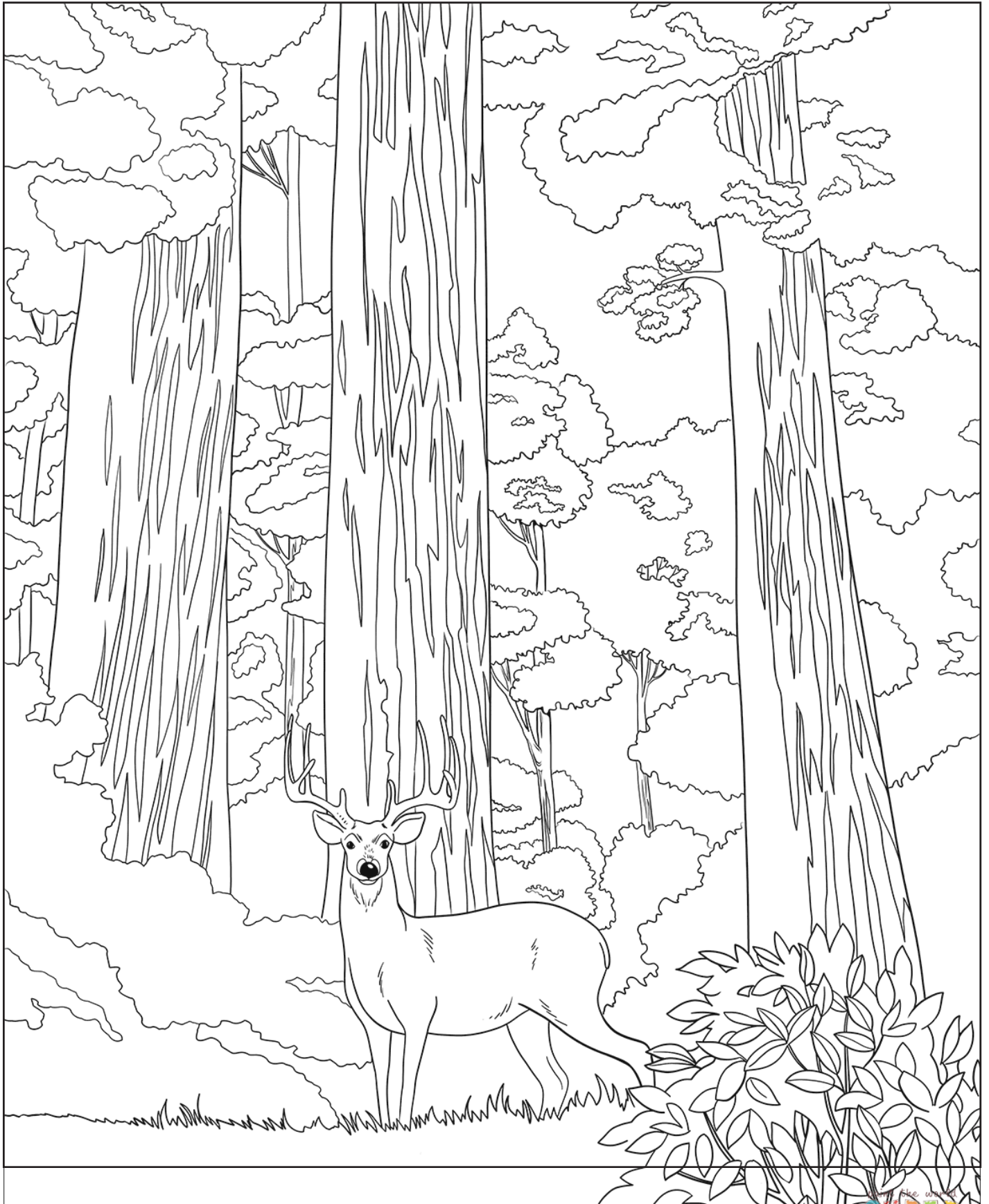
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WINTER - WEEK 2

"There's a whole world out there, right outside your window. You'd be a fool to miss it."



Deer Ears - page 2





1



2



3



4



5



6



7



8



9



10

Evergreen Leaf Hunt

Date: _____

Be an Evergreen Leaf Detective! How many of these wonderful, wintery and wild plant leaves can you spot in the forest? Check them off on this list! Images are shown in the same order as the list from top to bottom.

1. Salal

Leaves are shiny, thick and deep green. They are waxy to prevent water loss.

2. Oregon-grape

These leaves are made-up of leathery spiny leaflets and turn a beautiful purply-red colour in the winter. Oregon-grape often gets confused with English Holly.

3. Arbutus

Leaves are broad compared to needles. Arbutus is the only evergreen broad-leaved tree on Vancouver Island!

4. Douglas-fir

Leaves are needles that stand out around the twig, like a bottle scrub brush. They are pointed at the tip.

5. Western Redcedar

Leaves are flat in fan-like sprays. Scales overlap each other, looking like the leaves are braided or plaited. The plant's scientific name is *Thuja plicata*. The word *plicata* comes from a Greek word meaning "folded in plaits".

6. Grand fir

Leaves are needles that stand flat on the twig and alternate short to long, similar to the keys on a Grand Piano.

7. Sitka Spruce

Leaves are needles that are super stiff and sharp. Be cautious when shaking hands with a spruce tree!

8. Western Hemlock

Leaves are needles that are glossy and soft, green on the top and whitish underneath. Western Hemlock leaves are incredibly rich in Vitamin C!

9. Evergreen Huckleberry

Also known as winter huckleberry, the leaves are small, oval-shaped and look tightly clustered together.

10. Sword Fern

This is one of Vancouver Island's most common ferns! It's name comes from the shape of its fronds (similar to leaves) that resemble a small sword with a hilt where the frond attaches to the stem.



WINTER - WEEK 3

"Look deep into nature, and then you will understand everything better."

- Albert Einstein



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Who Am I and What Am I Doing in the Winter?

Date: _____

You will need at least 2 people for this activity, and it can be played both inside and outside. Select and source photos of different local wild animals of your choice (mammals, birds, insects, amphibians, reptiles, etc.) that live on Vancouver Island. The number of different photos you will need depends on the size of your group. Discuss with each other what each animal is and how they live/act in the winter (migrate, hibernate or stay active).

Print out the animal photos, and with clothes pegs, clip the photos on the back of each person (clip onto a hood, shirt, and/or sweater) without each person seeing what animal photo is on their back. The goal of this game is for each person to figure out what animal is on their back.

One person at a time takes a turn asking YES or NO questions to see if they can guess what animal is clipped onto their back. Depending on your time, each person can ask as many questions as needed until they guess their animal or put a limit on the number of questions each person can ask before they are given a hint or the answer. Examples of questions may include:

- Am I a mammal? Bird? Reptile? etc.
- Do I have legs? Wings? Fur? Feathers? Exoskeleton? Teeth? Beak?
- Am I most active during the day? Night?
- Do I migrate during the winter? Stay active? Hibernate?
- Am I a herbivore? Carnivore? Omnivore?re the frond attaches to the stem.

Note for Teachers:

If you are trying this game with a larger group, here are some tips:

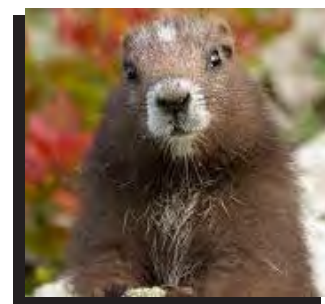
- 1) Select and print out 15-30 different photos of local wild animals. You can have 2 or 3 students with the same photo if needed.
- 2) This activity can be done as an entire class or breaking up the students into 2 to 3 groups. Potential ideas for splitting up the groups include: A hibernating group, a migrating group and a staying active group
2 or 3 groups with a mix of hibernators, migrators and those staying active Students that have the same animal in different groups.
- 3) Instead of taking turns asking questions, the students must mingle amongst themselves as a group and ask each other YES or NO questions that will help them figure out what animal is on their back. Tell the students they can only ask one question to each person, and then they need to ask their next question to a different person.
- 4) Provide your students with examples of questions they can ask each other that are appropriate to your grade level.
- 5) An extension of this activity may be that each student conducts a research project on what their animal is doing during the winter and how the winter on Vancouver Island impacts that animal.

The next pages provide animal images to start you off!

WINTER - WEEK 4 - Page 1 of 4

"One thing I've learned in the woods is that there is no such thing as random. Everything is steeped in meaning, colored by relationships, one thing with another."

- Robin Wall Kimmerer



Who Am I and What Am I Doing in the Winter?

Print these animal images to start off your fun!



Black bear

Grey Wolf



Raccoon



Who Am I and What Am I Doing in the Winter?

Print these animal images to start off your fun!



Images clockwise:
Thatching Ant,
Banana Slug,
Painted Turtle, and
Rough-skinned Newt



Who Am I and What Am I Doing in the Winter?

Print these animal images to start off your fun!



Pileated Woodpecker

Anna's hummingbird



Cutthroat trout

Evergreen Cone Hunt

Date: _____

When is a pine cone NOT a pine cone? When it's a fir cone!

Although it's common to refer to any tree cone as a 'pine' cone, this isn't actually correct. There are many different types of evergreen trees. Evergreen trees that make woody cones for their seeds are called conifers. A pine tree is only ONE type of conifer. Firs, cedars, hemlock and spruce all produce cones, and they make fir, cedar, hemlock, or spruce cones, NOT pine cones. In fact, pine trees are relatively uncommon in the Douglas-fir forests of Vancouver Island, so if you find a cone in the forest here, the odds are good that it *isn't* a pine cone.

Here are some common tree cones you can look for in the forest:



Douglas-fir
This is probably the most common cone found in the forests of Vancouver Island. Between each scale on this cone, long three-pronged bracts that look like mice's two hindfeet and tail are easily seen.



Western Red Cedar
The small, egg-shaped cones sit on top of the branch and look like tiny rose buds.



Grand Fir
Have you ever seen a cone sit upright on a branch? Grand fir cones do! Look for this, as well as the cones to look like lighter green, almost yellowish, barrels on the tree. It's rare to see Grand fir cones on the ground as they fall apart quickly, so look up to the tree branches to see them.



Sitka Spruce
Cones are big, over 3 inches long! Look for thin (almost paper-like) and wavy scales that are a reddish to yellowish-brown colour.



Western Hemlock
This tree produces some of the most cones of the five conifers! See if you can detect many small cones with thick scales clustered around the tree.



Shore Pine
If you're looking for an actual pine cone, you'll find them on shore pines. Also known as lodgepole pines, these trees produce plump cylindrical or egg-shaped cones up to 4cm long.



Western White Pine
Generally found at higher elevations, western white pine have long narrow cones up to 25cm long.

WINTER - WEEK 5

"There is a rumor of total welcome among the frosts of the winter morning."

- Mary Oliver

Snowy Animal Tracks

Date: _____

Snow in February? It's not actually that unusual on Vancouver Island to have snow at this time of year. Even a light dusting of snow, or melting slush, is a wonderful opportunity to look for the tracks left behind by animals as they move through your neighbourhood.

To warm up for your animal tracking adventure, try this:

- 1) Find a flat open area covered in snow. Even a light dusting of snow or just frost is enough. If there is no snow around you can do this on a sandy beach!
- 2) Use a stick or your foot to draw a starting line along one edge of the area and a finish line at the opposite side.
- 3) Choose an animal and think about how it moves. Then, act out that animal's movements from the starting line to the finish line. You might hop like a rabbit, waddle like a duck, run on all fours like a deer, or amble slowly along like a bear.
- 4) Repeat the activity as you return to the starting line, but with a different style of movement – running, skipping, marching, dragging one foot... be creative!

Once you've acted out three or four animals with different styles of movement, compare the different tracks you've created. Can you see pattern? How do your tracks look different if you run, skip, hop, or waddle? Can you tell from your tracks which direction you were moving?

Now – head out into a natural area and look for animal tracks. Draw them in the space below. Can you use the track patterns to figure out which direction the animal was going? How do you think the animal moved, did it run, walk, bounce, or hop? Use the ruler along the side of this page to measure the size of the tracks.

Length: _____
I think this animal was (circle one)
Running Walking Hopping
Notes: _____

Length: _____
I think this animal was (circle one)
Running Walking Hopping
Notes: _____

WINTER - WEEK 6

"I believe that wealth - real wealth - is found among people who have a sound sense of their place in the world, who link their actions and thoughts with those of others and who are strong, vigorous and co-operative in their communities and ecosystems."
- Dr. Nancy Turner



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Winter Sensory Warm-up

Date: _____

February on Vancouver Island can be cold and snowy or warm and rainy, but no matter what the weather is doing, we can all use a little more warmth this time of year.

Try this activity to warm up all of your senses before heading outside to find one treasure for each of your senses!

Rub your hands together until they feel warm. Once your hands are warm, place them on or over your ears for a count of five. Then, listen for sounds in nature. What can you hear?

Rub your hands together again. Place your warm hands in front of your nose and smell the air. How does it smell?

Rub your hands together again. This time, place them gently on your closed eyes (or in front of your eyes if you wear glasses) for the count of five. Open your eyes, and take a moment to look around.

Rub your hands together again. Place your warm hands in front of your mouth, and when it's warm remove your hands and stick out your tongue. Can you taste the air?

Rub your hands together one final time, and when they are warm, reach down and tickle the ground with your fingers. What textures do you notice? Is it warm or cold?

Now that your senses are warmed up, head out into a natural space near you and try to find the following five treasures - one for each sense.

Sight - A rock or leaf that is shaped like a heart

Sound - A bird singing. Can you imitate the call?

Touch - A dried leaf that breaks into small pieces easily when you crunch it.

Smell - Tree needles that smell like grapefruit. Check all the evergreen trees you can until you find one whose needles remind you of grapefruit or oranges. You may want to crush a few needles in your hand to get the smell to come out.

Taste - Go home and make a nice warm drink :)



WINTER - WEEK 7

"To be whole. To be complete. Wildness reminds us what it means to be human, what we are connected to rather than what we are separate from."

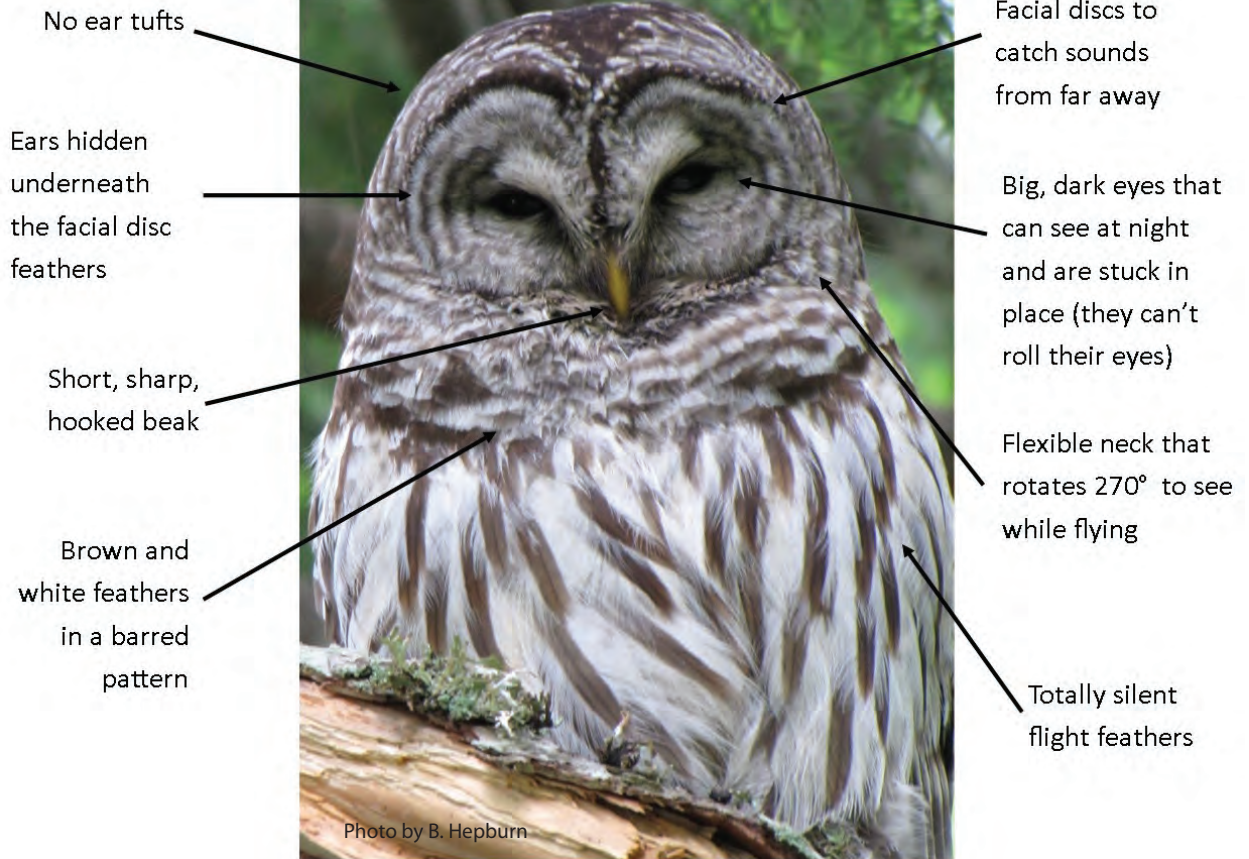
- Terry Tempest Williams



Who's Hooting?

Date: _____

Barred owl



The easiest way to find Barred owls is to hear them. Listen for a call that sounds like the one in this week's video: "Who cooks for you? Who cooks for you all?"

Try making your own Barred owl call with these simple instructions:

- 1) Out loud, say "Who cooks for you? Who cooks for you all?"
- 2) Pretend you have something sticky in your mouth like peanut or almond butter and say it again.
- 3) Now, imagine you're the Queen of England and say it again but with an English accent.
- 4) Great job! Now hold your hand in front of you mouth and say "Hello!". Do you feel the air coming out? When we talk we breathe air out. When owls hoot, they breathe air in. Try breathing in like you're surprised and say "Ah!".
- 5) Okay, now put it all together. With peanut butter in your mouth and an English accent breathe in and say "WHO COOKS FOR YOU? WHO COOKS FOR YOU ALL?".

WINTER - WEEK 8

"In the wild breath of nature feel the hush of presence."
- Angie Weiland-Crosby



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Tree Rings!

Date: _____

Look at the photos of tree rounds below. Count the number of rings on each tree. Using the yellow tape measure, guess how wide the tree is at the widest point. Record your answers below.



Tree #1: Number of rings: _____ Width across widest part: _____

Tree #2: Number of rings: _____ Width across widest part: _____

Find a stump, cut branch or tree round in your yard or near your house. Using the ruler to the left, measure it at the widest point. Count the number of rings. Record your answers below.

Tree #3: Number of rings: _____ Width across widest part: _____

Which tree has the most rings? _____ Remember, the number of rings are the age of the tree, so this tree is also the oldest!

Which tree is the widest? _____

Which tree do you think grew in the easiest conditions? _____

Which tree do you think grew in the most difficult conditions? _____

Which tree do you think would be the strongest? _____

WINTER - WEEK 9

"In a forest of a hundred thousand trees, no two leaves are alike. And no two journeys along the same path are alike.." - Paulo Coelho

