What to expect from this educational packet

This worksheet will teach you more about lynx and the important roles they play in our communities! Through this packet, you will:

- Learn about this fascinating species
- Explore Indigenous cultural connections
- Do some fun activities including drawing, crosswords and word searches
- Reflect on what you've learned with our discussion questions

Introduction

In the dense boreal forests of Canada and the northern US, lives the mysterious Canada lynx. Hunting, hiding, and sheltering in the underbrush and downed logs of old-growth coniferous forests, this wild feline preys almost exclusively on snowshoe hares. These two species have evolved together: as snowshoe hares have become faster to avoid being hunted, Canada lynx have adapted to become better hunters. Canada lynx are so dependent on snowshoe hare, that when snowshoe hare populations naturally plunge, so do the numbers of Canada lynx. With fewer lynx to hunt them, hare populations rise, and lynx populations follow.

In this educational packet, we will talk a lot about lynx, snowshoe hare, and their relationship with fire and the lodgepole pine! You will get to reflect on your learning and have an opportunity to draw the lynx along with other fun activities.

What do you know about lynx?

Write down some facts you know about this species, and come back at the end of the worksheet to see what you can add!





The Big Three: Relationships Between Canada Lynx, Snowshoe Hare and Lodgepole Pine



Canada lynx, Lynx canadensis

Canada lynx are sometimes called "the shadow of the forest" because they are mostly solitary, nocturnal and are so secretive that they are rarely observed by humans. They have many features that help them thrive in their cold, northern habitat. This includes their mottled gray-brown fur with a white underbelly that camouflages them amongst the trees. Lynx are known for their excellent eyesight and long ear tufts, which scientists think may help them hear through muffled snow. Their oversized paws act like snowshoes, and their extra-long hindlegs allow them to hunt by stalking their prey and then bounding over the deep snow to ambush and attack.



Snowshoe hare, Lepus americanus

Snowshoe hares are named for their large hind feet that help them balance upon deep snow like snowshoes. Their coat changes colour with the season to help them camouflage; it is white in winter to blend in with the snow, and brown in summer to hide them against the brown forest undergrowth. Snowshoe hares are a vital food source for many predators. They have evolved to have excellent hearing to detect their predators. Plus, they can run very fast (up to 45 km per hour!) and bound very far (up to 3 m!) to escape the hunt.



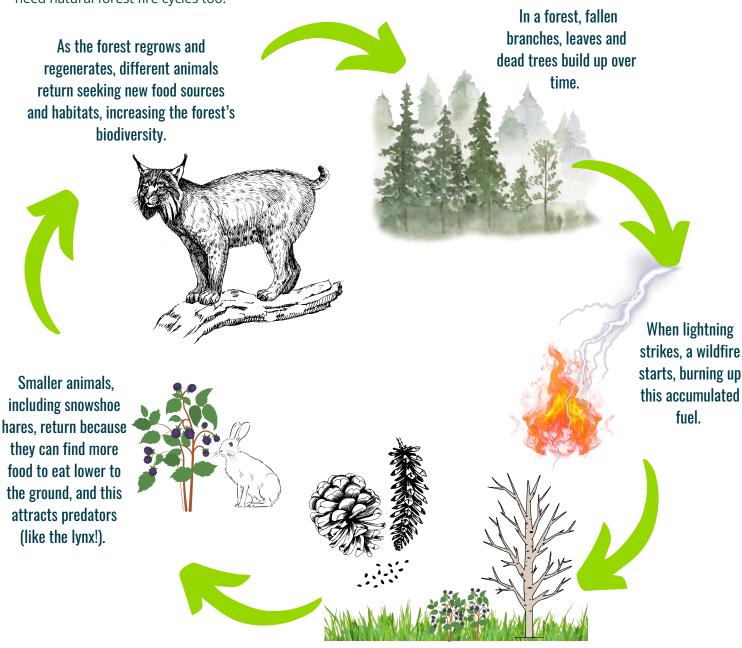
Lodgepole pine, Pinus contorta

Lodgepole pines grow up to 30 m tall, with a thin trunk, orange-brown-gray bark, leaves that grow in twisty needle pairs, and tight, prickly cones covered in pitch. Because they need the heat of fire to open their resin-covered cones to expose the seeds, they are one of the first species to regrow after a forest fire. They are called lodgepoles because some First Nations peoples used these straight-trunked pines to frame their teepees and lodge houses.



How fire connects these three species

This is a fascinating connection! While Canada lynx are well-adapted to cold, snowy conditions, they are dependent on wildfires. Why? In the winter, snowshoe hares love to eat the nutritious seeds of lodgepole pines. But because these seeds are sealed up in hard, prickly cones, covered with sticky resin, they can only be released when the cones open from the heat of natural fire cycles. The fire not only frees lodgepole pine seeds, but also helps clear the build up of dead vegetation in the forest. This releases nutrients and opens up space so that lodgepole pine forests can regenerate with a diverse understory, which provides food and refuge for hares. So, the diet of Canada lynx relies on snowshoe hares, snowshoe hares rely on lodgepole pines, and lodgepole pines rely on forest fires. So, Canada lynx need natural forest fire cycles too!





Wildfires help release spruce and pine seeds,



Exploring Indigenous cultural connections



This next section includes website links for deeper learning. To explore these resources, <u>please visit sierraclub.bc.ca/lynx-resource</u>



Learn how to say lynx in the language of the Indigenous community on whose territory you live

Visit FirstVoices.com to find words, songs and stories about Canada lynx from different First Nations. For example, you can learn how to say "lynx" in some First Nations languages in B.C.: Salish/Syilx, **wápupxn**; Tsilhqot'in (Xeni Gwet'in) **nundi.**

Canada lynx hold different meanings in different Indigenous cultures, depending on the region. But a common theme is a view of lynxes as dangerous and skillful hunters, with keen eyesight and senses. For some, lynx may represent mystery, intuition and secrecy.

A different perspective on lynx

Canada lynx's range is in the boreal forests across Canada, Alaska, the northern United States, and into the Rocky Mountains as far south as Colorado. However, their habitat is shrinking. Human development and logging in more mountainous regions remove trees and underbrush critical for lynx to hide, shelter and rear their kittens. It also removes the food sources of snowshoe hare, their primary prey. As climate change brings longer warmer seasons and more catastrophic forest fires, Canada lynx and snowshoe hare migrate in search of colder areas, which are getting smaller and smaller.

Lynx were once abundant in Washington State, particularly on the ancestral territories of the Confederate Tribes of the Colville Reservation in the Monashee-Kettle Mountain Range that runs from southeastern British Columbia through Colville National Forest in Washington. Since the building of the Grand Coulee Dam in 1942, these lands, waters and their ecosystems have been severely impacted, and many native animal populations, including those of salmon, bighorn sheep, coyotes, pronghorn deer, eagles, and Canada lynx have dwindled.

But restoration efforts have begun! Colville Confederate Tribes have been studying the health of their land and water ecosystems, and have been reintroducing native animals, including Canada lynx. Canadian trappers who once hunted lynx for their fur, are now trapping lynx to relocate them to the Monashee-Kettle Mountains as part of the Tribes' five-year plan to bring Canada lynx back to their ancestral home.

Read more about their efforts here and here!

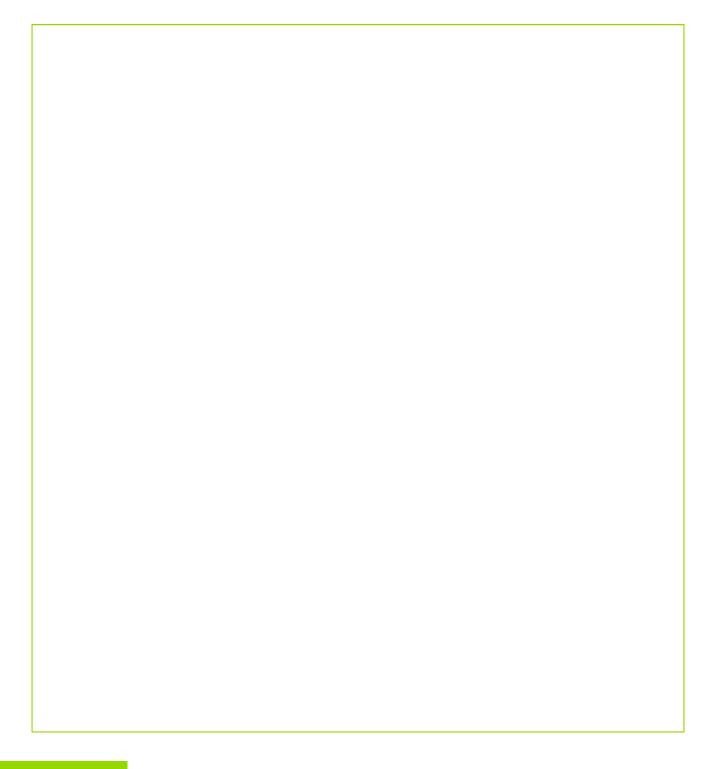


Activities



Draw a lynx!

With this activity, we encourage you to draw lynxes and their habitat. If you'd like a tutorial, you can watch our *Learn to Draw Lynx* lesson with the QR code above or visit <u>sierraclub.bc.ca/draw</u>.





Make your own lynx and snowshoe hare masks!

For this activity you will need:

- 1. Mask templates: Print out the template on the following pages to get started
- 2. Scissors: To make sure that you can cut everything out
- 3. Cardstock or other thick paper or felt: To form the base of your mask
- 4. Materials to decorate your mask: Markers, crayons, paints, fabric, colourful paper scraps, dried leaves, etc.
- 5. Glue (optional): If you want to add glitter to your mask, or extra materials you should grab some
- 6. Ribbon or string: You will need a piece long enough to go around your head, cut into 2 equal pieces
- 7. Holepunch, stapler, or needle and thread: To ensure the ribbon goes through the mask

Instructions:

- 1. CUT. Use the snowshoe hare and Canada lynx mask templates to cut your masks out of cardstock or felt.
- 2. MEASURE. Place your mask against your face and mark where you'd like the strap to be attached on both sides. Make sure it's not too close to the edge. If you're using a paper mask, use a holepunch to make a hole on both sides, and gently tie a ribbon through hole. If you are using felt, staple or sew the ribbon to your mask on both sides.
- 3. **DECORATE.** Both snowshoe hare and Canada lynx can camouflage in their environment. How would you decorate your mask to camouflage in your environment? If you like, decorate both sides of your snowshoe hare masks, or create two masks to represent your summer and winter coats.
- 4. **PLAY.** Did you make your masks with friends? Put them on and play Predator & Prey. Choose one Predator to wear a Canada lynx mask, and everyone else is Prey, wearing snowshoe hare masks. The lynx counts to 10 with eyes closed while the hares hide. Then the lynx prowls and hunts. If the lynx finds and tags a hare, the hare "dies". Hares can run away when the lynx approaches, and the lynx can only chase with 10 steps before 'tiring' and needing to stop. So, the lynx must use their stealth to get close and catch a hare.

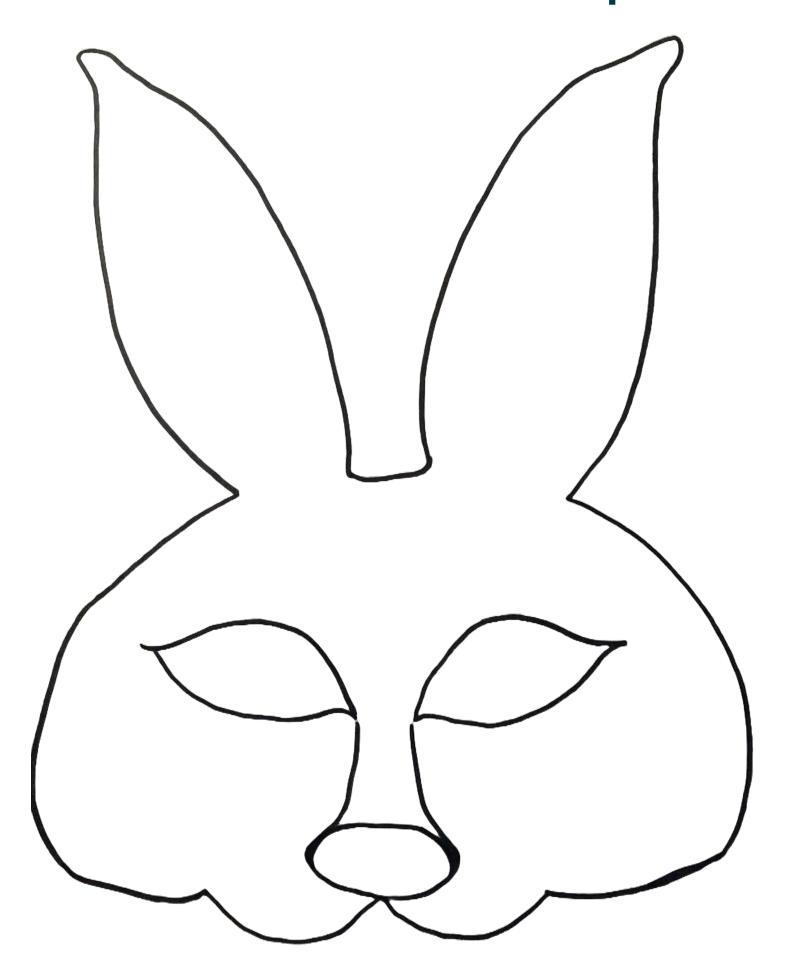




Print out these mask templates



Print out these mask templates



LYNX

WORD SEARCH

NRBEOMMUXPREDATORKVLGUMSW TSQHLAHCPXZPOUCJRHAQQCKLC ZQNFJUJSOLITARYRJADWZAWNY J T W O V R S E Q O C B O E J Y T Y N G H N D V C YTXLCMXIWGTMHCLLYTLGWACUL DLVJOTLBVLCESUTQLXYKEDQCE TLBUFDUOXES | MTGTAXMDAAROS EPREYTGRIXTANPECAMIFCLZNY DGPDOAVENBGUPOEEOHAOIYNIG OUYQMWDAPAJYARRRWIIRSNAFY Q S T P C P P L L O L A W X P T A N N E D X N E A LOVYRGZWVWLQSZRNHTDSUOQRN F S B F D C A S M M E E B W W Y K E U T N C V O F CAMOUFLAGEINPSCOGWRRDHSUA DSKOXSOFDZKVFIZFLGUNEZNSW SVQGHFFPBRZXRENWOFCRRIORI SUSFBWWEGUNDERBELLYYBXWEL TXVTICZBTQXJOEFUVIQIRHMED ULKCYZNSNOWSHOEHAREWUKMEF F B M Y W N C V V X R Y H O I D T I L K S G T M I TWLMTNLKTXWWDBTTV|KTHBBFR ETERRESTRIALREGENERATIONE DOFPFZSECBOILILDSYEMFIEVS G D E V E R G R E E N L W S Q Q P O P N F G I O J ETN J J F E L I N E R L P P B O I M A O A R C Y

Lodgepole pine - A type of conifer tree, known for its serotinous cones, that grow in North America

Temperature - A measurement of heat

Underbelly - The soft underside of an animal

Nocturnal - In reference to animals that are more active in the night

Predator - A type of animal that hunts for food, often atop the food chain

Elusive - Hard to find or catch

Solitary - Alone, in reference to animals it means they do not hunt in packs

Wildfire - Large fires, often in expansive forested areas

Paws - The furry feet of animals on all fours

Snowshoe hare - A long-eared mammal that has a white coat in the winter and brown coat in the summer

Regeneration - Regrowth over time

Terrestrial - Land-based

Underbrush - Shrubs and small trees that make up the lower part of a forest

Camouflage - The ability to blend in with your surroundings

Evergreen - A tree that does not lose its leaves in the winter

Snow - A type of precipitation that occurs in the extreme cold

Cycles - A process or pattern that repeats

Canada lynx - A large cat known as the shadow of the forest

Coniferous - A tree that produces cones

Northern - Higher in latitude

Feline - In the family of cats

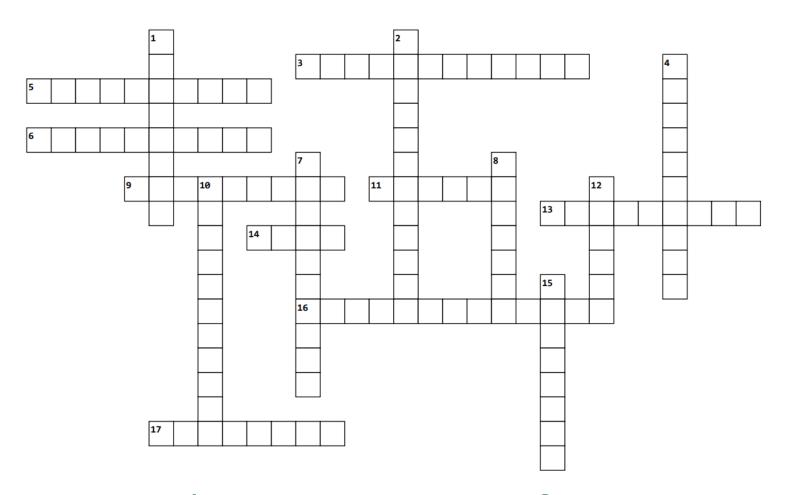
Boreal - A type of ecoregion just south of the arctic

Forest - A dynamic area filled with biodiverse plant and animal species

Tufted - A bunch or collection of hair



Lynx CROSSWORD PUZZLE



Across

- 3. Regrowth over time
- 5. A tree that produces cones
- 6. A large cat known as the shadow of the forest
- 9. Animals that are more active in the night
- 11. A type of ecoregion just south of the arctic
- 13. A tree that does not lose its leaves in the winter
- 14. A type of precipitation that occurs in the extreme cold
- 16. A type of conifer tree, known for its serotinous cones, that grow in North America
- 17. Alone, in reference to animals it means they do not hunt in packs

Down

- 1. A type of animal that hunts for food, often atop the food chain
- 2. A long-eared mammal that has a white coat in the winter and brown coat in the summer
- 4. Shrubs and small trees that make up the lower part of a forest
- 7. The ability to blend in with your surroundings
- 8. Hard to find or catch
- 10. Land-based
- 12. In the family of cats
- 15. Large fire, often in expansive forested areas

Answers: 1. Predator 2. Snowshoe Hare 3. Regeneration 4. Underbrush 5. Coniferous 6. Canada Lynx 7. Camouflage 8. Elusive 9. Nocturnal 10. Terrestrial 11. Boreal 12. Feline 13. Evergreen 14. Snow 15. Wildfire 16. Lodgepole Pine 17. Solitary



Discussion questions

Write down your thoughts and reflections to the questions below.

- What qualities or gifts of the Canada lynx do you admire and celebrate?
- How can we learn from Canada lynx, snowshoe hare and lodgepole pine? What lessons about interconnectivity, resilience and adaptability do they share?
- What might happen to Canada lynx and lodgepole pine if snowshoe hare disappeared? What might happen to snowshoe hare and lodgepole pine if Canada lynx disappeared? What might happen to us?
- We are all connected. How are you connected to Canada lynx?
- Where can we find hope and care in the story of Canada lynx?

Keep learning with us!

We wanted to express our sincere gratitude to all those who helped breathe life into this work.

To explore our resource list and additional learning materials, we invite you to visit <u>sierraclub.bc.ca/lynx-resource</u>.

