

GET TO KNOW

Wolverines



What to expect from this educational packet

This worksheet will teach you more about wolverines 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

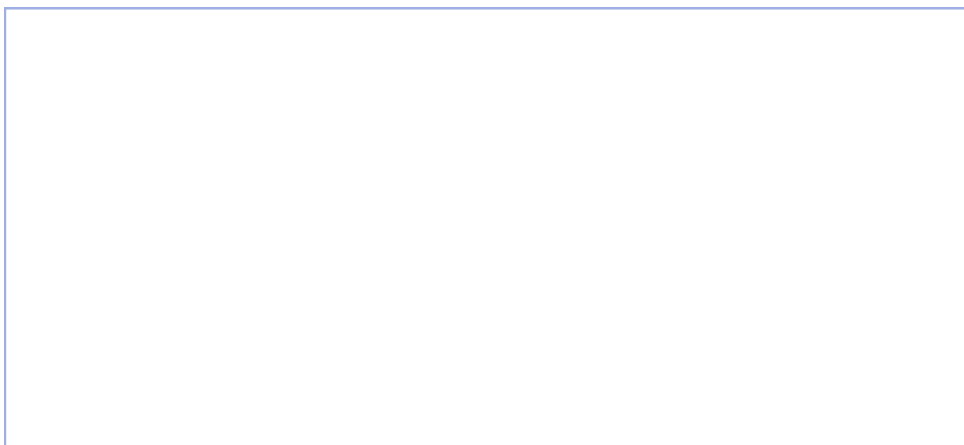
Introduction

Wolverines are the largest member of the Mustelidae family, which includes weasels, otters and badgers! Their scientific name is *Gulo gulo*, which means "glutton." Like bears and humans, wolverines walk on the soles of their feet in plantigrade posture. The wolverine has thick, dark, oily, water-repellant fur. Their big paws act like snowshoes, and combined with their stocky bodies and short legs, they can easily travel through deep, soft snow.

Wolverines travel amazing distances! A study by the Wildlife Conservation Society followed one male wolverine who travelled 402 km in 19 days. The distance they travel depends on food availability in their home range. Female wolverines' home ranges are 50-400 km² and males' are 230-2,580 km².

What do you know about wolverines?

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

A large, empty rectangular box with a thin black border, intended for students to write down facts about wolverines.

All about wolverines



Where do wolverines live?

Wolverines live in cold, remote regions of the Northern hemisphere, including parts of North America, Europe and Asia. They thrive in boreal forests and tundra environments with deep snowpack. As solitary animals, they roam their habitats alone except during mating season or when a mother is raising her young.



What do they eat?

Wolverines are carnivorous and primarily eat carrion (animal carcasses). Wolverines' diets vary depending on seasonal and regional food availability. They often eat ungulates (hooved animals, such as deer) which they hunt as live prey or find scavenging. They also eat other animals, such as beavers, ground squirrels, snowshoe hares or hoary marmots. To round out their diets, wolverines will eat some insects and vegetation, such as berries and pine nuts.

Fun fact! Wolverines have an upper molar in the back of the mouth that is rotated 90 degrees, towards the inside of the mouth. This special tooth allows them to crush bones and tear off meat from prey or other deceased animals that have been frozen solid.



What are their families like?

Wolverines breed from June through August. Female wolverines remain pregnant for approximately 215 days (about 7 months), after which they give birth to their young, called "kits" or "cubs", in February and March. Wolverines live for 10 to 12 years. They have a low rate of reproduction as female wolverines reproduce at the age of three or four and give birth to an average of two kits every other year. While wolverines are generally solitary, father wolverines may visit the dens of their kits. Young wolverines stay with their mother for 9-10 weeks after birth.



How do wolverines communicate?

Wolverines communicate through scent marking and various vocal sounds. Their vocalizations are normally made towards other wolverines and their young kits, though they may produce a vocalization if confronted with humans. When frightened or threatened, wolverines will produce a smelly secretion with their anal musk glands, coining the name “skunk bear.” They can communicate chemically with scent marking via urine and abdominal rubbing. They may use these abilities for territory marking or mating.



What threats do they face?

Wolverines are a species at risk in B.C. This means they could go extinct if we don't help them recover. Wolverine habitats cover large areas which are increasingly impacted by logging and industrial activities. This can make it harder for wolverines to find food, mates and shelter. Other human activities such as snowmobiling and hunting can disturb wolverines, causing stress, displacement and even the abandonment of their den sites. Climate change also impacts the cold, mountainous environments they thrive in.



How are they impacted by climate change?

Wolverines live in cool temperatures year-round and depend on deep, persistent snowfalls. Rising temperatures impact their cold and snowy habitats. In February, pregnant female wolverines need deep snow to dig their dens so that they can give birth and look after their kits. The snowpack is also necessary for the growing kits, who rely on the surrounding snow for insulation and protection from passing predators.

Exploring Indigenous cultural connections

When learning about environmental science, cool places and the plants and animals that inhabit them, we believe it is equally as important to understand the ways humans have lived in relationship with these lands and beings since time immemorial. Indigenous stewardship has adapted in many ways with increased climate impacts across the landscape. Sierra Club BC aims to honor Indigenous voices and to ensure that unique Nations and worldviews are respectfully acknowledged.

While we've shared some publicly available resources below as a starting point, it's best to engage with local Indigenous communities. Each Nation has distinct perspectives, cultures and governance systems, meaning that different communities will have different connections with wolverines. Many Nations have websites with a wealth of publicly shared knowledge that you can check out, or you could attend a public event hosted by the community. If you don't know whose territory you live on, you can visit Native-Land.ca to learn more.



This next section includes website links for deeper learning. To explore these resources, [please visit sierraclub.bc.ca/wolverines-resource](https://sierraclub.bc.ca/wolverines-resource)



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

Visit FirstVoices.com to find words, songs and stories about wolverines from different First Nations. Here are a few examples of 'wolverine' in different Coastal First Nation languages:

- Upriver Halkomelem: Shxwématsel
- Salish: Cišps
- Squamish: K'élk'ech

A different perspective on wolverines

Bobby Lake-Thom (Karuk, Seneca, and Cherokee) writes in the book *Spirits of the Earth: A Guide to Native American Nature Symbols, Stories and Ceremonies* that "the wolverine is a sign of good omens and good luck and wealth. Their power and medicine can be used for warrior power and provide good protection. They are good animals to have around outside the house."

Activities

Draw a wolverine!

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

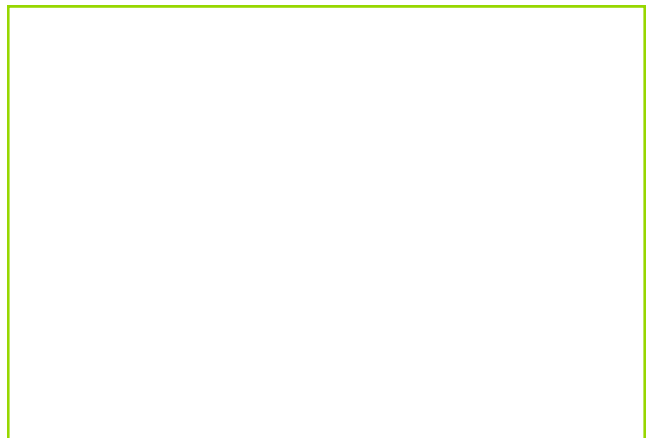
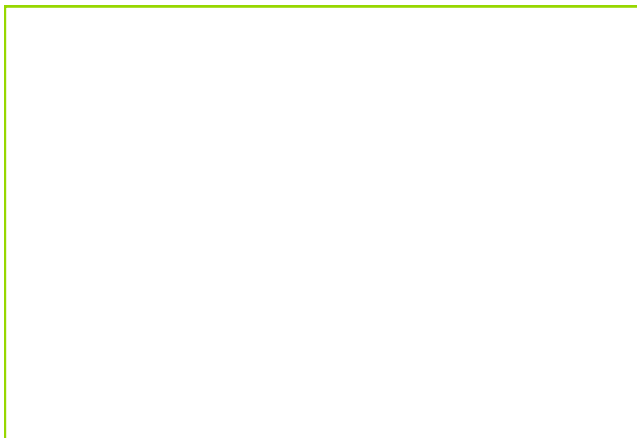
Watch a tutorial
on how to draw
wolverines!



Make a comic strip

Exercise your creative writing, drawing and storytelling skills through this comic strip activity. Many people know of the famous superhero, Wolverine, from the fictional comic series X-Men. Now, we challenge you to make your own comic about wolverine, the animal!

Take the information you learned from this packet to create a story about a wolverine in the wild. For example, the wolverine could be protecting their family, fighting a bear or searching for food!



Wolverine

WORD SEARCH

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

Terrestrial: In reference to a being that lives on land

Mustelidae: The scientific name for the weasel family, which the wolverine belongs to

Carnivore: In reference to a being that only or mostly eats the meat of other animals

Snowpack: A mass of snow that has been pressed down so that it forms a hard layer

Mammal: A vertebrate animal whose young feed off the milk from the mammary glands of the mother

Paws: The bottom portion of animals' feet, often seen with mammals such as wolverines

Hydrophobic: Water-repellent

Nocturnal: An animal primarily active at night

Gulo gulo: The scientific name for wolverines

Habitat: An area where a being lives

Alpine: High mountainous regions

Arctic: Regions relating to the north pole, most notable for the presence of ice and few species

Plantigrade: Walking on the soles of the feet, like a human or bear

Wolverine: A stocky, carnivorous and generally solitary mammal of the weasel family that lives in the Arctic and subarctic regions of North America, Europe, and Asia

Solitary: Describes the wolverine's behaviour, which is generally by choice without companions

Glutton: Describes animals that eat a lot of food, often more than is necessary for survival

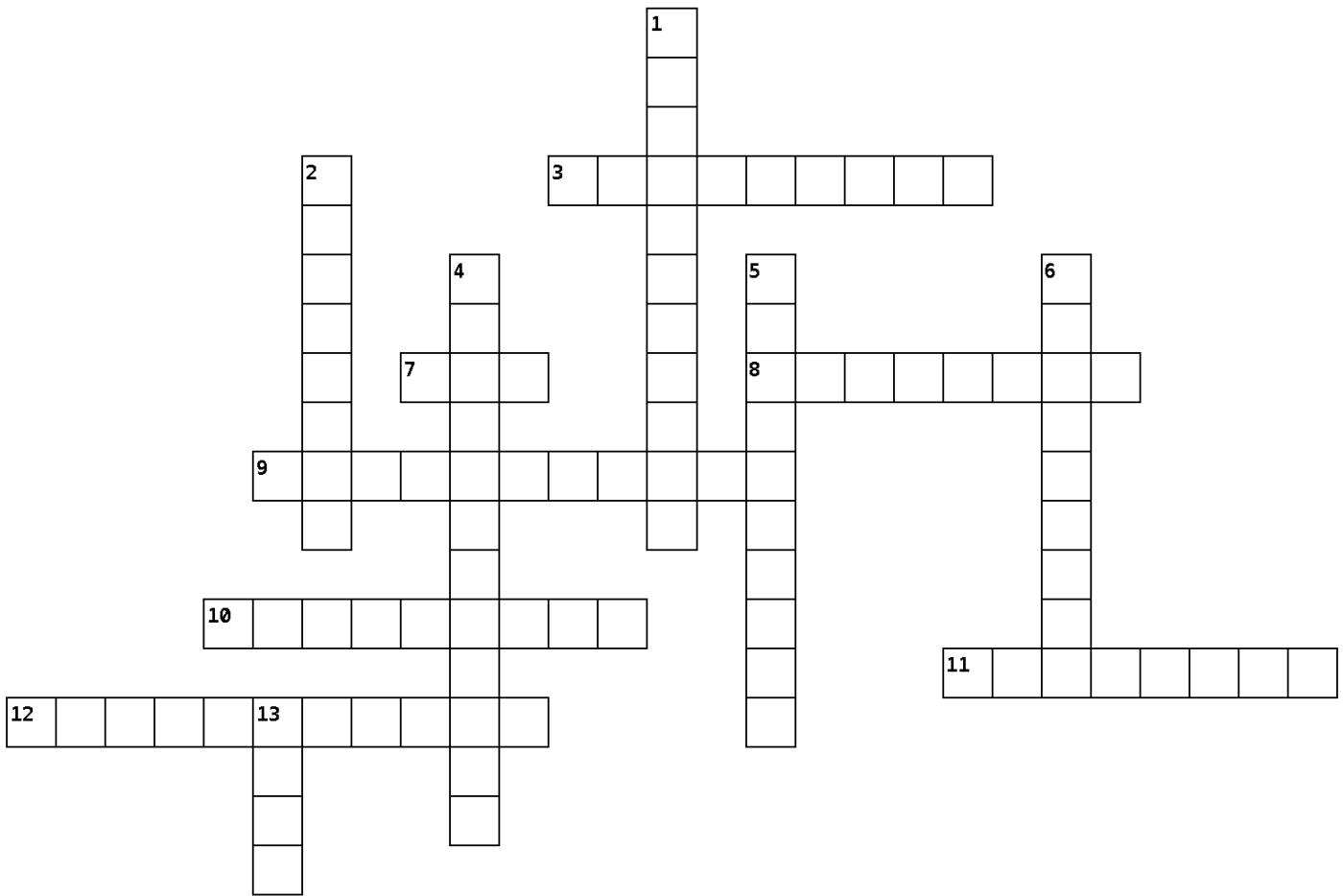
Weasel: Small, slender, carnivorous mammals

Kits: A term for young wolverines

Den: Shelter wolverines create in the snowpack to reproduce and give birth

Wolverine

CROSSWORD PUZZLE



Across

- 3.** An animal or organism that mostly eats meat or the flesh of animals
- 7.** The shelter wolverines create in the snowpack to reproduce and give birth
- 8.** A mass of snow that has been pressed down so that it forms a hard layer
- 9.** Walking on the soles of the feet, like a human or a bear
- 10.** A stocky, carnivorous and generally solitary mammal of the weasel family
- 11.** Describes the wolverine's behaviour in which it is generally alone by choice, without companions
- 12.** Describes the water-repellant nature of wolverines' fur

Down

- 1.** Describes how wolverines live on land
- 2.** The scientific name for the wolverine
- 4.** A distinctive odour marking that wolverines deposit on trees or other surfaces for mating or marking territory
- 5.** The scientific name for the weasel family
- 6.** Describes how wolverines are active at night
- 13.** The wolverine's feet which have pads and claws

Answers: 1. Terrestrial, 2. Gulo gulo, 3. Carnivore, 4. Scent marking, 5. Mustelidae, 6. Nocturnal, 7. Den, 8. Snowpack, 9. Plantigrade, 10. Wolverine, 11. Solitary, 12. Hydrophobic, 13. Paws

Discussion questions

Write down your thoughts and reflections to the questions below.

- What makes the wolverine special and unique? What gifts do they possess that allow them to protect themselves and their community?
- How can we learn from the wolverine? In what ways can we show adaptability, fierceness and resilience in our daily lives?
- We are all connected. In what ways are you connected to the wolverine?
- Wolverines are at risk of extinction due to climate change effects and habitat loss. What are the repercussions if a species becomes extinct? How can we fix this?
- What are our responsibilities in preventing drought and enhancing snowpack? How can we help lessen the burden placed on wolverines?
- What is a belief or worldview that is dissolving in you to make room for a caring future?
- What messages do you receive about our forests and wolverines? How can we better take care of the forests?

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 sierraclub.bc.ca/wolverines-resource.

