

Winter Travel Pre-immersion Student Package



1. Trip Planning and Preparation
2. Cultural and Ecological Considerations
3. Adapt to Winter
4. Ecological Impacts of Winter Recreation
5. Creating Inquiry Questions

Lesson 1 Trip Planning and Preparation

Student Learner Outcome:

4.2 Display familiarity with basic winter trip planning tools (route cards, elevation profiles)

When planning an outdoor adventure you should answer three questions:

- A. *Where are we going?*
- B. *What should we bring?*
- C. *What do we need to know?*

A. *Where are we going?*

Jasper National Park

Go to the Parks Canada website for **Jasper National Park** to find information under **Public Safety**. <http://www.pc.gc.ca/eng/pn-np/ab/jasper/visit/securite-safety.aspx>

1. Gather the following information and fill in the chart below.
Use a mapping website to find information on how to get to Jasper.
(Use the Jasper town site as the Palisades Centre is not specifically listed.)

	Information
Directions and Map from your school to Jasper.	
The distance in km.	
The time it will take to drive there.	
Look up the road conditions report.	
Look at the weather forecast for Jasper for the next few days.	

Jasper National Park – A Dark Sky Preserve

Watch the video found at <http://www.pc.gc.ca/eng/pn-np/ab/jasper/edu/cieletaille-darksky.aspx>

1. What is the message of the video and what are your thoughts about it?
2. Jasper is a "Dark Sky Preserve" and winter is a great time for experiencing this. What is a "Dark Sky Preserve"?

*** The Palisades is not affected by light pollution and is a great place to see the stars. Think about using a "Star Map" application on your smart phone when you are here (free time in the evenings). Ask the staff for telescopes and binoculars as well!!!*

The Palisades Stewardship Education Centre

1. Go to ***thepalisadescentre.ca*** and look through the website. What questions do you still have?

2. Navigate to our Winter Travel video:

<http://www.bing.com/videos/search?q=palisades+winter+travel+youtube&view=detail&mid=66815959A12014AFF3B166815959A12014AFF3B1&FORM=VIRE1>

List three activities in the video. Circle your favourite. *Put a star next to the one you would like to learn more about.*

3. What two things do you hope to get out of this course (besides credits!)

Marmot Basin

You will be spending the first two days of the Winter Travel course at Marmot Basin Ski Resort. Go to ***skimarmot.com*** and research the following information:

1. Highest Elevation:
2. Size of the ski terrain:
3. How big is the Lift System?
4. Total number of runs:
5. How many lodges:
6. Hours of Operation:
7. Latest snow report:
8. Which run would you like to try?
9. What is the “Marmot Learning Centre”?
10. Have you been to Marmot before? If so, what was your best memory/experience?

Wabasso Cross-Country Ski

There is a cross-country ski activity during the Winter Travel course.

Find the Winter Activities – Cross country ski trail map for Jasper National Park – Wabasso Campground.

1. How long is the outer loop?
2. Is the terrain difficult or easy?
3. What is a highlight of the trail?

B. What do we bring?

Most of your time spent at the Palisades will be outside and active. You will need to dress to keep warm and dry and for a variety of physical activity. We will be in various locations out in the Park where there will be no chance to go inside to warm up or change clothes. If you are not comfortable you won't have fun and it will be hard to learn anything. The Palisades appreciates the work of AdventureSmart.

Go to <https://www.adventuresmart.ca/snow/snow.htm>.

1. When planning outdoor adventures in the winter, what are five things you should, "Know before you go!".

Go to https://www.adventuresmart.ca/trip_safety/layering.htm

2. What is the overall reason we should layer our clothes to stay warm and comfortable in the outdoors?
3. The layers break into three categories: Base, Thermal, and Protective Layers. These three layers work together to _____, _____, and _____.
4. The base layer should not be cotton ("cotton kills"). Why?
5. The thermal layer should be snug. Why?

6. Go "virtual shopping" at MEC. Give an example of an ideal protective layer. Explain why it is ideal.

7. Can you think of some other items you can bring to make your trip to the Palisades more safe/comfortable? (Think of being active day and night and away from places home or stores where you can usually easily grab things).

For additional information, check out:

<http://www.wikihow.com/Dress-for-the-Cold>

<http://blog.sportssignup.com/blog/bid/120652/Keep-Warm-During-Winter-Sports-with-Three-Layers>

C. What do we need to know?

Knowing about your group is an important step in trip planning. Medical conditions, previous injuries, level of fitness and skill are essential in deciding where and what kind of a trip you will be doing. (Don't plan a 50km ski touring adventure if you or someone in your group has only ever skied 5 km!) Before you come to the Palisades Centre you should assess your skills and start getting fit.

If you have an injury or medical condition that might affect you, notify your teacher.

- We will be downhill skiing/snowboarding to get to the Marmot learning Centre. Can you ski/board a green run? (If not there still might be time for a lesson or two!)

- We will be cross country skiing for 2 hours and covering a distance of 4-5km. We will teach you all the basics but the more fit you are the more fun you will have. Can you walk/jog a distance of 4km? (Get active before the course!)

- You will be snowshoeing a distance of about 3-4km on trails and going up and down hills. Can you climb a big set of stairs 2 at a time a few times in a row? (Try it at school!)

If you are not sure, now is your chance to start training. Even a few hours of practice will go a long way to making your trip more fun and enjoyable.

1. **Student safety** is a priority at the Palisades Stewardship Education Centre. It is important that you follow the guidelines as set out by the professionals accompanying you on your learning adventures as their goal is to keep you safe! In addition, you should know and abide by the “Alpine Responsibility Code” when you are at Marmot Basin. Review the 10 principles and note them here:



Lesson 2 Cultural and Ecological Considerations



Student Learner Outcome

2.2 Identify and understand cultural and ecological considerations/issues of the environments.

1. What is meant by the word, “integrity”? How does the word “integrity” relate to our individual actions towards the environment?

2. Read how Parks Canada defines **Ecological Integrity**. In two sentences, explain what Ecological Integrity is and how Parks Canada attempts to protect it.
http://www.pc.gc.ca/progs/np-pn/intro_e.asp and
<http://www.pc.gc.ca/progs/np-pn/ie-ei.aspx>

3. Brainstorm, what things might stress/hurt the ecological integrity of a national park such as Jasper?

4. Check out the six stressors that Parks Canada identifies. How did your brainstorm list compare? <http://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=CDE1612B-1>

5. Based on your understanding of “integrity” and “ecological integrity”, what do you think “cultural integrity” means?

6. The Government of Canada recognizes that, “*Jasper National Park represents a natural area of Canadian significance. By law, it is protected for public understanding, appreciation and enjoyment, while being maintained in an unimpaired state for future generations. National Parks have existed in Canada for well over a century. However, when Jasper National Park was created in 1907, park legislation and management, were based on European and North American ideas about conservation and tourism, and did not consider the perspectives and traditions of Aboriginal peoples. Early managers considered many traditional activities inconsistent with national park goals and, as a result, Aboriginal groups lost their physical and cultural connection to parts of their traditional territories.*”
Based on the above acknowledgement, what do you think happened to the Aboriginal groups that were in the area when Jasper National Park was created? Investigate. What did you find out? Be prepared to share your findings.

7. Create a “mind map” on how you connect with ecological integrity or with cultural integrity. Look at the sample mind map in the powerpoint. Create a mind map that links ecological integrity or cultural integrity with the four areas (Family, Future, Environment, Recreation.)

Example connections:

Mountain Recreation

Students may link aspects of the economy such as tourism to preserving special places

Students may link recreation with family though health

Your Future

Link could be one day teaching their children to ski the way their parents did for them.

With E.I intact they will still be able to view caribou with their grand children

Our Environment

Link might be healthy predator / prey relationships

Climate change could challenge species at risk

Your Family

Shared experience in nature may lead to sense of ownership

Family traditions in nature could lead to career choices

Lesson 3 Adapt to Winter

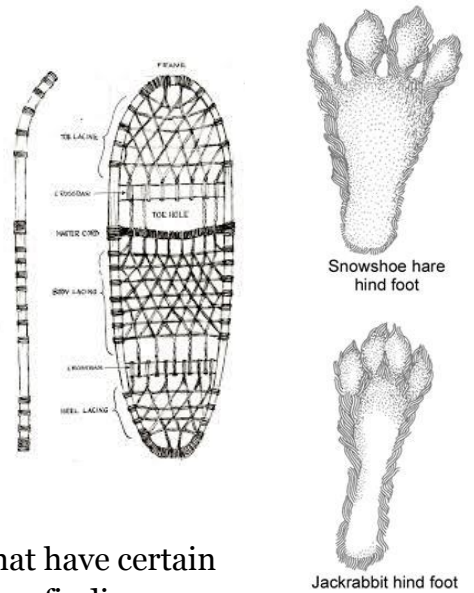
Student Learner Outcome

2.3 Identify and understand the human and wildlife adaptations for use in winter environments.



It's the changing of the seasons and winter is locked in. How do you adapt to shorter days, freezing temperatures and mountains of snow? How have North American animals evolved over the millennia to adapt to our winters?




There are three main strategies for surviving winter - migration, dormancy and toughing it out. We have chosen to tough it out!

Here's how one animal does it. Those footprints across the ski trail are the snowshoe hare. They're large and rounded with pressure in the middle on the pads and a buoyant layer of hair on the outside. Taking the biggest clue from the namehow did we, as humans, use this natural example to get us safely over mountains of snow? Snow shoes!



1. Research and pick examples of animals and humans that have certain adaptations for winter. Fill out the chart below with your findings.

ANIMAL	Skin/hair/colour	Feet	Behaviour	Other
Snow shoe hare 		Large hind foot that stays on top of snow and distributes weight		
Human 				

<p>Caribou</p> 				
<p>Weasel</p> 	<p>White fur in winter</p>			
<p>Ptarmigan</p> 				

2. Make up and draw an animal that is perfectly suited for winter. You need to describe where it lives, how often does it come out, what does it look like, how does it hide and stay warm?

Lesson 4 Ecological Impacts of Winter Recreation

Student Learner Outcomes

2.5 Evaluate the ecological impacts of winter recreation

2.6 Justify opinions about winter travel and ecological integrity in a clear and logical way considering the impact on others

Canadian National Parks were invented to preserve wildlife, natural resources and also provide recreational opportunities. Unfortunately, some parts of national parks became so popular that human use degraded the very thing people came to experience. As the decades passed and human impact on the environment increased, parks were seen as a place where whole ecosystems needed to be protected.

An intact ecosystem is a geographical area that includes all the living and non living elements plus all natural processes and interactions.

Our activities can damage ecosystems beyond repair. Now, for any activity to take place, it must first pass through a filter of **ecological integrity**. This means the activity must not harm the long term viability of the ecosystem in which it takes place. This provides a measurable way to help determine what activities can or cannot happen in a national park.

1. Do you think the Wordle in the powerpoint reflects the important elements of ecological integrity? Evaluate the wordle. For example, are there words that should be bigger or smaller?

2. Pick **only one of the following assignment options to complete.**

Option A. Activities in National Parks

Use the following web sites to help answer the next questions.

<http://www.pc.gc.ca/eng/pn-np/ab/jasper/activ.aspx>

<http://www.jasper.travel/things-to-do/activities/winter>

<http://www.pc.gc.ca/eng/pn-np/ab/jasper/activ/hiver-winter.aspx>

1. Name 3 winter activities that are encouraged in Jasper National Park?
2. Name 3 activities that are not permitted. Use the **Regulations outlined** at <http://www.pc.gc.ca/eng/pn-np/mtn/reglements-regulations/reglements-regulations.aspx>
3. Why do you think these activities not permitted? Remember, you may not know the actual answer, just think about what it is about an activity that makes it permitted or not permitted. We will cover some of the park management decisions when you get to the Palisades.
4. If there were no rules and you could do what you wanted, what winter activities would you like to do in Jasper National Park?

Option B: Environmental impacts

For the next question, refer to pages 140-146 of the following document which outlines the environmental impacts of skiing (alpine and Nordic).

http://www.olympic.org/Documents/Reports/EN/en_report_1118.pdf

1. Since winter activities by definition take place on frozen ice or snow, do you think the overall impact on vegetation is more or less than summer activities? Why?
2. Name 5 environmental impacts that are considered in the development of either cross country or downhill trails.
3. Do you think these effects are enough to ban cross country or downhill skiing in Jasper National Park? Why or why not.
4. Use the following sites and articles for the next question.

<http://www.pc.gc.ca/pn-np/nl/grosmorne/activ/motoneige-snowmobiling1/m-s2.aspx>

http://articles.washingtonpost.com/2013-02-22/national/37234645_1_snow-coaches-yellowstone-vacations-snowmobile-groups

<http://www.pc.gc.ca/eng/pn-np/ab/jasper/ne/apactions-bcactions.aspx>

Snowmobiling is an accepted activity in some protected areas. If you can do it in Yellowstone or Gros Morne National Park, why not in Jasper National Park's Maligne Valley?

Lesson 5 Questions for Inquiry with Parks Canada Experts

Student Learner Outcome

2.4 Demonstrate understanding of the specific concepts associated with winter travel and avalanche awareness

Use the space below to make up a question that interested you about each of the previous 4 topics. Make up a final question about your upcoming time at the Palisades.

	Your question
Lesson 1	
Lesson 2	
Lesson 3	
Lesson 4	
Palisades	