



## Directory Riding Mountain National Park GIS Lessons

This group of lessons touches on many aspects of the curriculum including Social Studies, Science, sustainability, creative arts, and languages:

- Investigating how human activities affect ecosystems;
- Identifying elements of physical and human geography;
- Promote actions that reflect principles of environmental stewardship and sustainability;
- Reconsidering personal assumptions based on new information and ideas;
- Using of appropriate tools and technologies such as GPS and GIS to accomplish tasks and creating maps;
- Discussing the potential consequences of introducing new species and of species of extinction to an ecosystem;
- Reflecting on how the biodiversity of an ecosystem contributes to its sustainability;
- Identifying ways in which competing interests and needs influence control and use of land;
- Experimenting with a variety of ways to communicate ideas for different audiences and purposes through various means.
- Propose and defend innovative options or solutions to address issues and problems.

### **Focus on fire – A Look at Prescribed Burning in Riding Mountain National Park**

- ArcView 3x instructions doc [beginner](#)
- ArcGIS 9x instructions doc [beginner](#)
- Results- Prescribed burning in RMNP map
  - what your map should look like in 3x (jpg )
  - what your map should look like in 9x (jpg )
- Resources
  - prescribed burn photos (includes photos of cultural artefacts)
  - interview video (Steve Cornelson)
  - map of RMNP
- Songs of Riding Mountain
  - Song : 'Grassland RAP' ( mpg )
  - Song lyrics – 'Grassland RAP'
- GIS data
- Parks Canada Fact sheets
  - Be FireSmart, Be Prepared
  - From Fire Suppression to Prescribed Burning
  - Controlling Wildfire
  - Wildlife and Fire
    - Ecosystem Management
    - Why Prescribed fire Instead of Logging
    - Prescribed Fire
    - Protecting Communities
    - Fire Suppressant
    - Where there's fire
    - Whitebark Pine
    - Natural Processes
    - RMNP FireSmart booklet
    - RMNP FireSmart Panel



- Glossary
- Challenge Options
  - Includes Debate, FireSmart and the Homeowner Role play, Poetry
- Web Links

### **Intruder alert – High-Risk Areas for Invasive Plant Species Expansion in Riding Mountain national park**

- ArcView 3x instructions doc [Intermediate](#)
- ArcGIS 9x instructions doc [Intermediate](#)
- Results- High Risk area Map
  - what your map should look like in 3x jpg
  - what your map should look like in 9x jpg
- Resources
  - interview video (Wybo Vanderschuit)
  - map of RMNP
- GIS data
- Parks Canada Fact sheets
  - Invasive species and RMNP
  - Top Five Invasive Plants
- Glossary
- Challenge Options
- Web Links

### **Weasel Waypoints – Maintaining Ecological Integrity; Re-introduction of Species in RMNP**

- ArcView 3x instructions doc [Intermediate](#)
- ArcGIS 9x instructions doc [Intermediate](#)
- Results – ‘Pine Marten Habitat Ranges in RMNP’ map
  - what your map should look like in 3x jpg
  - what your map should look like in 9x jpg
- Resources
  - Photos
  - Interview video (Glenn Schmidt)
  - Marten Habitat Range Data Sheet
  - Where’s the weasel powerpoint
  - map of RMNP
- Songs of Riding Mountain
  - Song : ‘Mustelids’ ( mpg )
  - Song lyrics – ‘Mustelids’
- GIS data
- Parks Canada Fact Sheets
  - Pine Marten Biology
  - Re-introduction of the pine marten to RMNP
  - Species at Risk Act

- Glossary
- Challenge Options
  - Includes activities and lessons such as Bison re-introduction, Creating a Species at Risk poster, Tract transect activity, Writing a news report
- Web Links
  - Includes links to more lessons on the Parks Canada Teachers Resource Centre on Species at Risk and Re-introduction of Species .

### ***Roadkill Retrospect – A study of Vehicle-Caused Wildlife Mortality Along Hwy10 through RMNP***

- ArcView 3x instructions doc [Advanced](#)
- ArcGIS 9x instructions doc [Advanced](#)
- Results – Vehicle-caused Wildlife Mortality Map
  - what your map should look like in 3x jpg
  - what your map should look like in 9x jpg
- Resources
  - Photos
  - Map of RMNP
- GIS data
- Parks Canada Fact sheets
  - Limiting Wildlife Mortalities on Hwy. 10
- Glossary
- Challenge Options
  - Includes Designing a Public awareness campaign
- Web Links

### **Tracing Trails - Proposing a Loop Extension of RMNP's Arrowhead Trail**

- ArcView 3x instructions doc [advanced](#)
- ArcGIS 9x instructions doc [advanced](#)
- Results – map of proposed loop
  - what your map should look like in 3x jpg
  - what your map should look like in 9x jpg
- Resources
  - Photos
  - Map of RMNP
- GIS data
- Parks Canada Fact sheets
  - Successful Trail Design
- Glossary
- Challenge Options

### ***Prairie Mountain – Hiking/Camping Options on the Manitoba Escarpment in RMNP***

- ArcView 3x instructions doc [advanced](#)
- ArcGIS 9x instructions doc [advanced](#)
- Results – escarpment map

- what your map should look like in 3x jpg
  - what your map should look like in 9x jpg
- Resources
  - Escarpment photos
  - Map of RMNP
- GIS data
- Parks Canada Fact sheets
  - Flora and Fauna of the MB Escarpment and RMNP
    - Geological History of the Manitoba Escarpment
    - History of the MB Escarpment
- Glossary
- Challenge Options

### **Welcome teachers**

### **Readme – teacher and IT instructions**

### **Required Extensions**

### **Teacher evaluation**

### **Tips for Teachers**