Building a Railway:
Human and Physical Considerations

Lesson Overview
Students will create a poster that compares the physical and human components required to build the Canadian Pacific Railway in the 1880's to railroad development projects in the present.

Grade Level
Grade 11

Time Required
90 minutes

Curriculum Connection (Province/Territory and course)
Manitoba – Social Studies, History of Canada

Additional Resources, Materials and Equipment Required
- White board markers
- White board
- Large physical map of Canada
- Poster exemplars from previous students (if available)
- Poster board
- White paper
- Markers
- Pencil Crayons
- Rulers
- Appendix A: Background Information (attached)
- Fun Tack or Masking Tape
- CANADA'S STEEL ROADS poster-map
- Computers with internet access

Websites
- Canadian Atlas Online Tracking rail theme
- www.canadiangeographic.ca/atlas
- Railway Association of Canada
- http://www.railcan.ca

Main Objective
The goal is to produce a poster that compares and contrasts the physical and human components of building a railway in the past and present.
Learning Outcomes
By the end of the lesson, students will be able to:

- appreciate that Canadian expansion from sea to sea was made possible by the construction of the TransCanada railway;
- understand that growth and industrialization impacts the country and causes advancements in transportation and communication;
- appreciate the role of many groups of people in the construction of the railway;
- comprehend the physical and human challenges associated with the construction of a railway;
- contrast the past with building a new railway line today.
## The Lesson

<table>
<thead>
<tr>
<th>The Lesson</th>
<th>Teacher Activity</th>
<th>Student Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>Ask students what they know about how the Canadian Pacific Railway was formed. Record this information on the white board.</td>
<td>Brainstorm and provide answers to the question.</td>
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<td>Refer to a large physical map of Canada and ask the students what geographical challenges would exist in the construction of such a railway.</td>
<td>Participate in the discussion.</td>
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<td>Keeping in mind the year that construction began (early 1880’s), ask the students what human challenges would exist in the construction of the railway.</td>
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<td>[Teacher note: the population of Canada in the 1880’s was between 4.2 and 4.7 million]</td>
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<td>Ask the class: Where could workers for the railway construction project come from? How would the rail company attract such workers? How do these operations function today?</td>
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<td>Distribute <em>Appendix A: Background Information</em> and review it with the class.</td>
<td>Listen to the background information and ask questions as needed.</td>
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<td><strong>Lesson Development</strong></td>
<td>Advise students that they are going to produce a poster that compares the physical and human components of railway construction in the past and in the present.</td>
<td>Listen, respond and ask questions when pertinent.</td>
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<td>Show students some exemplars if possible.</td>
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<td>If no exemplars exist, the teacher may act as scribe as the class describes what the ideal poster</td>
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would look like.
Inform students that their poster will be evaluated using a rubric (see the Assessment section of this lesson for a link to an example). Explain that assessment will come from their peers as well as the teacher.

Escort students to computers so that they may do some background research. (See the Additional Resources section of the lesson for a list of websites that can be used.) After the research is complete, instruct students to produce their posters.

| Conduct research. | Produce a poster. |

**Conclusion**

- Ask students to share their posters with the rest of the class by doing a gallery walk.
- Ask students to rate and assess the posters.
- Display the posters on the walls around the classroom.
- Circulate and rate the posters.

**Lesson Extension**

- Develop an example of the physical and human components required to build a new railway to the North where new resources/minerals are being discovered and will need to be transported to market.

**Assessment of Student Learning**

A sample rubric for this type of assignment can be found at [http://engres.ied.edu.hk/lang_arts/tasks/sampleAsseRubrics/PosterRubric-2.htm](http://engres.ied.edu.hk/lang_arts/tasks/sampleAsseRubrics/PosterRubric-2.htm).

Compile peer results and include the teacher assessment also. Suggestion: to do 1/3 teacher assessment, 1/3 self-assessment and 1/3 peer assessment.

**Link to Canadian National Standards for Geography**

**Essential Element #3: Human Systems**

- Impact of human migration

**Geographic Skill #3: Organizing geographic information**

- Use a variety of media to develop and organize integrated summaries of geographic information.
Appendix A: Background Information

The Canadian railway industry is a backbone of the Canadian economy. The industry helped build competitive advantage for businesses and communities alike across the nation, and can continue to do so going forward.

Canadian railways invest roughly $2.0 billion each year to maintain the thousands of cars and locomotives and 45,000 kilometres of track on which this equipment moves, and to develop the new tools we employ to improve the quality and reliability of service to customers.

- Canadian Rail is the third largest Rail network in the world.
- Rail in Canada handles the fourth largest volume of goods in the world.
- Two thirds of Canada's Rail traffic moves trans-border and overseas trade.
- Rail is a significant contributor to Canada's balance of payment gains from the movement of imports from third countries through Canadian ports into the United States by Rail.
- Private Rail companies in Canada are owned directly by tens of thousands of investors, including thousands of their own employees, and indirectly by millions of ordinary Canadians through savings and pension plans.
- Rail paid $459 million in fuel, property taxes and sales taxes in 2010. In addition to this substantial contribution, corporate taxes as well as personal income taxes for Rail employees should be noted.
- Rail pays $2.5 billion annually in wages and benefits.
- In 2009, Canada's Rail businesses invested $1.5 billion in new capital programs, an almost 10 per cent increase from the previous year, despite the economic downturn, in order to support growth and service improvements.
- 40 per cent of Canada's exports rely on Rail transportation.
- Rail currently employs more than 32,000 jobs and supports an additional 60,000 direct and indirect Rail supplier jobs.
- Approximately two million people work in businesses that rely on Rail to provide a growing, safe, secure, reliable, competitive and environmentally sustainable network.
- Average annual earnings in the Rail business, at $75,500, are amongst the highest in Canadian industry.

Source: Rail Association of Canada