

# WORK THROUGH TIME

*Cape Breton Stories of Land & Sea*



## Grade Seven – The S&L Railway

Atlantic Canada Curriculum – Specific Curriculum Outcomes (SCO)

### Lesson Plan Based on *Work Through Time* Story:

*Tracks across the Landscape – The S&L Railway*

**Overview:** The railway had a defining influence on the settlement of Canada. The S&L railway provided transportation for residents as well as a route to carry Sydney coal to the ice-free harbour in Louisbourg. These lessons will give students a better understanding of the role of the train in Cape Breton history.

GRADE SEVEN SCO MATH	<p><b>A10</b> Illustrate, explain, and express ratios, fractions, decimals, and percents in alternative forms</p> <p><b>A11</b> Demonstrate number sense for percent</p> <p><b>B4</b> Determine and use the most appropriate computational method in problem situations involving whole numbers and/or decimals</p> <p><b>B10</b> Create and solve problems that involve the use of percent</p> <p><b>B14</b> Solve and pose problems that utilize addition, subtraction, multiplication, and division of integer</p> <p><b>D3</b> Develop and use rate as a tool for solving indirect measurement problems in a variety of contexts</p>
GRADE SEVEN SCO GYM	<ul style="list-style-type: none"><li>• Know and understand the concept of reading a map</li></ul>
GRADE SEVEN SCO ART	<ul style="list-style-type: none"><li>• Manipulate and organize design elements and principles to achieve planned compositions</li><li>• Work interactively, co-operatively, and collaboratively</li></ul>

<p>GRADE SEVEN SCO LANGUAGE</p>	<p><b>1.1</b> Recognize that contributions from many participants are needed to generate and sustain discussions</p> <p><b>2.1</b> Participate in small-group conversation and whole-class discussion recognizing that there are a range of strategies that contribute to effective talk</p> <p><b>2.3</b> Follow instructions and respond to questions and directions</p> <p><b>2.4</b> Evaluate speakers and the effectiveness of their talk in particular contexts; identify the verbal and non-verbal language cues used by speakers (repetition, volume, and eye contact)</p> <p><b>3.1</b> Demonstrate active speaking and listening skills such as making eye contact, rephrasing when appropriate, clarifying comments, extending, refining, and/or summarizing points already made</p> <p><b>6.1</b> Extend personal responses, either orally or in writing, to print and non-print texts by explaining in some detail initial or basic reactions to those texts</p> <p><b>6.2</b> Make evaluations or judgments about texts and express personal points of view</p> <p><b>8.1</b> Experiment with a range of strategies (brainstorming, sketching, freewriting) to extend and explore learning, to reflect on their own and others' ideas, and to identify problems and consider solutions</p> <p><b>8.4</b> Demonstrate an ability to integrate interesting effects in imaginative writing and other forms of representation</p> <p><b>9.1</b> Produce a range of writing forms, for example, stories, cartoons, journals, business and personal letters, speeches, reports, interviews, messages, poems, and advertisements</p> <p><b>10.3</b> Acquire some exposure to the various technologies used for communicating to a variety of audiences for a range of purposes (videos, e-mail, word processing, audiotapes)</p>
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<p>GRADE SEVEN SCO SCIENCE</p>	<p><b>310-2b</b> Classify rocks on the basis of their characteristics and method of formation</p> <p><b>112-3</b> Explain how society's needs led to developments in technologies designed to use rocks</p>
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<p>GRADE SEVEN SCO SOCIAL STUDIES</p>	<p><b>7.2.1</b> Analyze how commodities that lead to economic empowerment have change</p> <ul style="list-style-type: none"> <li>• Examine the importance of land and natural resources as economic commodities in Canada's history</li> </ul>
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GRADE SEVEN SCO MUSIC	N/A
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GRADE SEVEN SCO TECHNOLOGY	<p><b>CT 9.1</b> Represent their learning in a range of media, including print, video, audio, and multimedia, with growing confidence and competence</p> <p><b>PTS 9.2</b> In the process of collecting, analyzing, and displaying data, independently create electronic charts, tables, and graphs; and design, create, and manipulate spreadsheets and databases</p> <p><b>PTS 9.5</b> Under the general supervision of their teachers, independently manipulate sound and a range of image types, using digital imaging equipment and computer-based editing, to represent their learning in a variety of ways and for particular audiences</p>
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GRADE SEVEN SCO HEALTH	N/A
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NOVA SCOTIA BOOK BUREAU	
<p>The Nova Scotia School Book Bureau is responsible for the distribution of learning resources and related products to support teaching and learning and to ensure availability in a cost-effective manner to Nova Scotia schools. Resources may be searched by level, topic and subject area.</p> <p>Many resources appropriate for this lesson are available through the Nova Scotia Allocated Learning Resources (ALR) at the Nova Scotia School Book Bureau (NSSBB).</p> <p>Please visit: <a href="https://w3apps.ednet.ns.ca/nssbb/search_alr.asp">https://w3apps.ednet.ns.ca/nssbb/search_alr.asp</a></p> <p>Nova Scotia School Book Bureau, 10 Acadia St, Dartmouth NS B2Y 4H3 Phone: (902) 424-5516, Fax: (902) 424-0545, E-mail: <a href="mailto:nssbb@gov.ns.ca">nssbb@gov.ns.ca</a></p>	

## SUGGESTED VIDEO RESOURCES

**National Film Board (NFB):** In January 2009, the NFB launched its online Screening Room, offering Canadian and international web users the ability to stream hundreds of NFB films for free. It was created as part of a project to digitize the NFB's collection of films. Over 700 films are free and the remainder may be viewed by subscription.

The cost of subscription for one teacher is \$19.95 and \$99 for an elementary school.

Please visit: <http://www.nfb.ca/education/en/>

**World Wide Web:** You Tube (<http://www.youtube.com/>) and Google Video (<http://video.google.ca>) have many short videos which may be relevant to this lesson.

**Discovery Education:** Has thousands of videos for boards that subscribe to this resource (password protected). Please visit: <http://streaming.discoveryeducation.com/>

**NS Dept of Education LRT videos:**  
Please visit: <http://lrt.ednet.ns.ca/>

## BACKGROUND

The S&L Railway was a part of life between Louisbourg and Sydney for almost 100 years. Construction for the first S&L began in 1874. Although it was destroyed by fire in 1883, the railway was rebuilt and ran until it was dismantled in 1968. At the turn of the century residents of communities isolated from the main centre, traveled by foot, horse or train if they were fortunate enough to live near a train route.

The S&L railway was built to transport coal between Sydney and Louisbourg. The port of Louisbourg, unlike Sydney was an ice-free winter port. Instead of shipping from Sydney, the coal was routed through the communities on the way to Louisbourg. This had an enormous impact on the people in these communities. It provided them with affordable transportation as well as a source of employment.

## IMPLEMENTATION STRATEGIES

### LESSON PLAN ONE: AUDIO STORY

- Approximate lesson time: 20 minutes
- Materials needed: Computer with Internet Access
- Listen to the audio version of *Tracks across the Landscape – The S&L Railway*.

### LESSON PLAN TWO: TRAIN AND PLANE

- Approximate lesson time: 1 hour
- Materials needed: Computer with Internet Access, word processing
- Arrange students into groups of two, one representing train, the other airplane. Tourists, Jack and Jill have three weeks to make a trip across Canada and are trying to decide how they will travel from Halifax to Vancouver. Will they take a train or an airplane? Departing from Halifax they want to make stops in Ottawa, Winnipeg and Edmonton. Vancouver is their final destination. Jill wants to take the train but Jack wants to fly.
- Students will write a persuasive letter to either Jack or Jill, as to the reasons why they should pick the type of transportation the particular student represents. Be sure to research the air and train fares taking into account accommodation rates for every day on vacation. (Keep accommodations costs in mind – Jack and Jill must have lodgings every day of the trip). The goal of our tourists is to have a fun trip and return home to Halifax in three weeks.
- The letters should be concise and no more than 300 words.
- Read the letters to another class or select a community group. The teacher may pick the top five to be read aloud to avoid too long a listening session. Ask for a secret vote from the audience, as to the most convincing argument.
- See Appendix One for Train and Plane Evaluation Rubric

### LESSON PLAN THREE: S&L TIMELINE

- Approximate lesson time: 1 hour plus homework
- Materials needed: S&L Chronology (see Appendix Two), art supplies
- The S&L Railway was a part of life between Louisbourg and Sydney for almost 100 years. Although it was destroyed by fire in 1883 the railway was rebuilt and ran until it was dismantled in 1968.
- Create a chronological time line for the S&L beginning in 1871. Choose significant dates mentioned in the S&L Railroad story and tie them into corresponding dates in the history of Canada. The time range should be an overview of the years when the railway was operating. The number of dates represented may be at the teacher's discretion.
- See Appendix Three for S&L Timeline Evaluation Rubric

### LESSON PLAN FOUR: GOOGLE MAP EXERCISE

- Approximate lesson time: 1 hour
- Materials needed: Computer with Internet Access
- On a Google map of Cape Breton make an interactive map pinpointing where the *Inverness Railway and Coal Company Passenger Train* made stops for passengers. Take note: Cathrn's Pnd has been renamed Maryville.
- Go to My Maps. Create a new map and name your map (S&L Railway), and give a description, then click save.
- Find the sites mentioned below. Zoom in, pick up balloon marker and place it on the location. In the space balloon write in the name of the stop and two relevant pieces of information about the place. Repeat for all stops.
- Save your work. When complete, email to the teacher.
- See Appendix Four for Google Maps Evaluation Rubric

# Inverness Railway & Coal Co.,

## PASSENGER TRAIN SERVICE.

EASTBOUND TRAINS Read Down		TIME TABLE Atlantic Standard (local) time. Trains run daily except Sunday.		WESTBOUND TRAINS Read Up	
No. 52	No. 54	MILES	STATIONS	No. 51	No. 53
A. M.	P. M.			A. M.	P. M.
110.07	13.55	0	Pt. Tpr. Jct.	29.55	23.35
10.13	14.00	1.3	Pt. Hksbry.	29.50	23.27
10.32	14.10	4.7	Pt. Hastings	19.37	13.10
	14.15			29.27	
	14.27	8.8	Troy	19.17	
	14.40	12.7	Cregmish	19.06	
	14.52	16.9	Craigmore	18.57	
	15.07	23.1	Judique	18.34	
	15.20	27.6	Cthrn's Pnd	18.21	
	25.35	32.5	Port Hood	18.08	
	15.45			28.00	
	16.00	37.2	Glencoe	17.45	
	16.21	44.5	Mabou	17.15	
	16.23				
	16.35	47.4	Glendyer	17.05	
	17.00	52.2	Black River	16.50	
	17.12	56.6	Strathlorae	16.3	
	27.25	60.9	Inverness	16.20	

Trains make close connection at Point Tupper Junction with I. C. R. passenger trains excepting the Maritime Express which leaves Point Tupper at night.

### LESSON PLAN FIVE: SCHEDULE ANALYSIS

- Approximate lesson time: 30 minutes
- Materials needed: Train schedule (seen in Lesson Four, above)
- Calculate the average speed of the train as it trundles through Inverness County, from Point Tupper to Inverness, allowing a five-minute stop at each station.

## LESSON PLAN SIX: FIVE MINUTE VIDEO TOUR

- Approximate lesson time: Several class periods
- Materials needed: Camcorder, video editing software
- The train provides its passengers with the opportunity to sit back and watch the scenery. Unlike an airplane they have ample room and clouds don't hamper the view. Make video of a drive through your community from the vantage point of an imaginary rail passenger. This may be accomplished as a passenger in a car or by taking a walking tour. Create a storyboard to plan out scenes. Edit out unnecessary footage, trimming the video to five minutes and enter an audio commentary of the scenery.
- Seniors in our community are an excellent source of information on the past. Arrange to bring completed videos to a senior's complex for their viewing. Take the opportunity to ask questions on the importance of train travel during their lives.
- See Appendix Five for Five Minute Video Tour Evaluation Rubric

## LESSON PLAN SEVEN: MAP ART COLLAGE

- Approximate lesson time: 1 hour plus homework
- Materials needed: Art supplies
- In 1867 Canada became a country. There were four provinces, New Brunswick, Nova Scotia, Ontario and Quebec. In 1870 the Northwest Territories and Manitoba joined and in 1871 British Columbia joined on the condition that a transcontinental railway would be built. Thus, the railway played an important part in Canada's consolidation as a nation. Throughout our history, every province and territory except Nunavut relied on rail travel at some time.
- Craft a pictorial collage using a map of Canada for your background. Include every province and the three territories. The pictures for each province or territory should characterize some of the following features: geographic points of interest, industries, major cities, celebrities, landmarks, and wildlife. Identify these with word tags.
- See Appendix Six for Map Art Collage Rubric

## LESSON PLAN EIGHT: TRAIN MATH

- A map has a scale of: 3 centimetres = 4 kilometres. If two cities are 8 centimetres apart on the map, what is the actual distance between the cities, to the nearest tenth of a kilometer?
- Beginning at 6:50 AM trains depart from Halifax enroute to Toronto every 45 minutes. You arrive at the station at 10:15 A.M. How long will you have to wait for the next train to Toronto
- Write the unit rate km/h for a train ride of 791 km in 4 hours and 55 minutes. Round to the nearest hundredth if necessary.
- The table below shows the number of travelers taking the train weekly for several years. Find the percent increase from 1992 to 1994. Round your answer to the nearest whole percent.

Year	1991	1992	1993	1994
Guests	331	361	426	508

- In 1959 the S&L line covers 116.03 miles of tracks; yearly freight totals in the range of 4,000,000 tons; 400 people are employed, and there are 31 locomotives on the roster. One of them, built in 1891, is still in service. Make up two word problems using the values in these sentences, using numerical operations.

## LESSON PLAN NINE: CAPE BRETON COAL

- Approximate lesson time: 30 minutes, extended activity
- Materials needed: Computer with Internet Access
- The S&L Railway owed its existence to coal. It was built for transporting coal from Sydney to the ice-free winter port of Louisbourg.
- Coal is a combustible sedimentary rock formed from the remains of plants. There are three forms of coal. Lignite is soft and brownish black without a high lustre. Bituminous coal is of medium hardness, is shiny and black and is the type of coal which was used with iron to produce steel at the Sydney steel mills. Bituminous coal is the variety of coal mined in Cape Breton. Anthracite coal is extremely shiny and

black, has less impurities and burns hotter and cleaner. Anthracite is metamorphic due to the heat and pressure it was exposed to over time. Commercial coalfields in Cape Breton were located in Inverness, Port Hood, Mabou, Sydney and Cape Breton County.

- Explain the role of coal in the development of industries and settlement of communities in Cape Breton. What environmental responsibilities need to be examined with the possible reopening of a coal mine in New Waterford, Donkin and North Sydney?

- These sites provide important information.

History of coal mining in Nova Scotia

<http://www.mininghistory.ns.ca/>

Coal Association of Canada

[http://www.coal.ca/content/index.php?option=com\\_content](http://www.coal.ca/content/index.php?option=com_content)

## LESSON PLAN NINE: MAKING COAL

- Approximate lesson time: Extended activity

- Materials needed: Aquarium, beach type sand, plant leaves, fine silt, sieve

- Coal is composed of decayed plant matter that accumulated in swampy areas hundreds of millions of years ago. These beds were subsequently covered by sand and silt when the area was flooded by higher water levels. The plant matter changed form over millions of years. It first changed to peat, plant material usually found in bogs that is beginning to change to carbon. As layer after layer of sediment built up over the peat, the intense pressure squeezed out water, forming lignite a soft brown-black coal. Bituminous coal is a continuation of the process and is harder and blacker than lignite. As time passed and more heat and pressure was applied to the bituminous coal, it metamorphosed into anthracite. This type of coal has more carbon, is hard, black and shiny and burns cleaner and more efficiently.

- This activity will simulate the formation of coal. Fill an aquarium with 6 inches of water. Cover the bottom of the aquarium with 2 inches of beach type sand. On top of this, place a layer of plant matter 1 cm thick. Let it sit for a month and observe changes in the plants. *Store this project away from the classroom for it may have an unpleasant odor.* After a month pour a 2 cm layer of fine silt (sifted soil) over the plant layer and remove any surface water. Pour on another 2 cm of sand and let it sit until the contents have dried sufficiently to allow examination of the layers of 'coal'

## LESSON PLAN TEN: TRAIN SCHEDULE MATH

- Approximate lesson time: 1 hour
- Materials needed: Stationary supplies
- These math problems are drawn from the Via Rail fare and time schedule. 'Return Trip' means the whole trip – both ways or there and back.

Data	Problem
<p><b>A) Truro to Toronto Return</b></p> <p>The Via Rail train departs Truro at 14:11 and arrives in Montreal at 08:17. It leaves Montreal at 9:40 and arrives in Toronto at 15:24</p> <p>Return Trip. The train leaves Toronto at 11:35 and arrives in Montreal at 17:09. Departs Montreal at 18:30 and arrives in Truro at 14:46</p> <p>Total return fare: \$443.00 + GST</p>	<p>How much time was spent on the train from Montreal to Truro?</p> <p>Add the province of Nova Scotia's GST to find the total cost of the trip?</p>
<p><b>B) Toronto to Windsor Return</b></p> <p>The train departs Toronto, Ontario at 7:50 and arrives in Windsor, Ontario at 12:07. The train departs Windsor at 5:45 and arrives in Toronto at 10:24.</p> <p>Total return fare: \$122 + \$6.10 GST Total \$128.10</p>	<p>What is the total time spent on the train for the return trip from Toronto and Windsor?</p>
<p><b>C) Toronto to Winnipeg Return</b></p> <p>The train departs Toronto at 22:00 on May 7 and arrives in Winnipeg at 8:01 on May 9.</p>	<p>Calculate the cost of the trip using the GST rate for Ontario</p>

<p>It leaves Winnipeg at 23:30 on May 17 and arrives in Toronto at 9:30 on May 19.</p> <p>Total return fare: \$414.00 + GST</p>	
<p><b>D) Winnipeg to Jasper Return</b></p> <p>The train leaves Winnipeg at 12:00 and arrives in Jasper at 13:00 the following day.</p> <p>The train departs Jasper at 17:30 and arrives in Winnipeg 20:30 the following day.</p> <p>Total return fare: \$372.00 + \$18.60 =\$390.00</p>	<p>Calculate the total time spent on the train for the return trip.</p>
<p><b>E) Jasper to Kamloops Return</b></p> <p>The train leaves Jasper at 14:30 and arrives in Kamloops at 23:09.</p> <p>The train leaves Kamloops at 6:35 and arrives in Jasper at 16:00.</p> <p>Total \$160.00 + GST</p>	<p>Calculate the cost of the return trip using the GST rate for Alberta.</p>
<p><b>F) Truro to Kamloops Return</b></p> <p>Return train trip from Truro to Kamloops Total \$1,696 + GST</p>	<p>Calculate the total cost of the return trip from Truro to Kamloops. Use Nova Scotia GST.</p>

## LESSON PLAN ELEVEN: PRODUCE A COMMERCIAL

- Approximate lesson time: Several class periods
- Materials needed: Camcorder, video editing software
- Prepare for this lesson by recoding and saving commercials.
- During a class viewing session, discuss the characteristics of effective commercials. The best commercials are short and to the point and most are no longer than 30 seconds.
- Make a commercial for a railroad, designed to encourage rail travel as an adventure. It can be amusing, dramatic, serious, or what ever provides inspiration at the time. Use a storyboard for dialogue and scenes.
- Record, edit and have a film festival to show case the talent.

## LESSON PLAN TWELVE: PICTURE REFLECTIONS

- Approximate lesson time: 20 minutes
- Materials needed: Computer with Internet Access
- Choose a photograph from the S&L Railway Gallery on the *Work Through Time* site.
- Study the photograph. What was your first impression? Examine it closely and if possible use a magnifying glass or view it in a photo-editing program which allows magnification. Make a list of all you see in the photograph: persons, places, and things.
- List some things one might conclude from the picture.
- Write down questions you might want to ask about the picture. Use the same sheet of paper to record all thoughts and impressions. See Appendix Seven for Picture Reflection Chart.

## FOLLOW-UP ENRICHMENT

Plan a rail trip across Canada with two-day stops in one city per province. Ask students to compete to find the best deal. Passengers must have sleeping accommodations every night. Food need not be calculated.

## EVALUATION

Use observation, anecdotal records and work products as methods of assessment as well as the rubrics provided.

## LINKS TO SUPPORTING INFORMATION

- (1) Trans Canada Trail, Inverness to Port Hastings, Cape Breton NS  
<http://www.trailpeak.com/trail-Trans-Canada-Trail-Inverness-to-Port-Hastings>
- (2) Trans Canada Trail  
<http://www.tctrail.ca/thetrail.php>
- (3) Trail locator  
[http://www.tctrail.ca/tlocator/tlocator\\_en.html](http://www.tctrail.ca/tlocator/tlocator_en.html)
- (4) Wikipedia Sales Tax chart Canada  
[http://en.wikipedia.org/wiki/Sales\\_taxes\\_in\\_Canada](http://en.wikipedia.org/wiki/Sales_taxes_in_Canada)
- (5) Railways of Canada Archives  
<http://www.trainweb.org/canadianrailways/CanadianRailLinks.html>
- (6) Train Web  
<http://www.trainweb.org/>
- (7) Train Map - Truro to Inverness to Sydney  
<http://www.trainweb.org/canadianrailways/PrototypeData/RightOfWay/>
- (8) Canadian National Railways Sydney Subdivision 1984  
<http://www.trainweb.org/canadianrailways/PrototypeData>

(9) Canadian Railway Songs

<http://www.railwaysongs.ca/>

(10) Nova Scotia Mines and Minerals ~ Historical Timeline, 1604-1992

<http://www.gov.ns.ca/nsarm/virtual/menmines/timeline.asp?Language=English>

(11) Coal Game

<http://www.coaleducation.org/lessons/sme/elem/31.htm>

(12) Coal websites

<http://www.uky.edu/KGS/education/coal.htm>

(13) Free Coal Kit - Coal Association of Canada

[http://www.coal.ca/content/index.php?option=com\\_content](http://www.coal.ca/content/index.php?option=com_content)

## APPENDICES

APPENDIX ONE: TRAIN AND PLANE RUBRIC
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	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Content</b>	Prior research into both modes of travel is evident and used powerfully to persuade reader.	Prior research into both modes of travel is evident and to used to persuade reader.	Some prior research into both modes of travel is evident and some points used to persuade reader.	No prior research into either mode of travel is evident and poor persuasive points made.
<b>Letter parts</b> heading, greeting, body, closing, and signature	Includes all letter components in proper position.	Includes all letter components.	Includes most letter components.	Includes some letter components.
<b>Grammar:</b> capitalization, punctuation and spelling	All grammatical conventions are met	Paper contains a few grammatical errors.	Paper contains some grammatical errors.	Paper contains many grammatical errors.
<b>Persuasiveness</b>	Presents a very persuasive argument.	Presents a fairly persuasive argument.	Presents a somewhat persuasive argument.	Does not present a very persuasive argument.

## APPENDIX TWO: S&L CHRONOLOGY

### *Dates and Events of Significance in the History of the S & L Railway*

1672 - Nicholas Denys, an early French settler on Cape Breton Island writes of "Mines of coal through the whole extent of my concessions near the seashore." Coal is "mined" by chipping it from cliffs.

1720 - French begin first real coal mines at Cow Bay (Port Morien).

1814 - British engineer, George Stephenson, constructs first practical steam locomotive at Killingworth Colliery, near Newcastle, England.

1818 - In Pictou County, Nova Scotia, two miles of standard gauge train tracks are laid for use with horse-drawn coal cars.

1827 - British firm of Rundell, Bridge and Rundell is granted a monopoly on mining rights in Nova Scotia. They form the General Mining Association [GMA]. Collieries open at Sydney Mines; first train tracks are laid shortly thereafter. Horses provide the motive power.

1839 - Nova Scotia claims the first steam locomotive in use east of Montreal, as the *Samson* takes to the rails on a halfmile track at Pictou.

1851 - A town meeting in Sydney calls on the government to consider Sydney and Louisbourg as termini for the newly proposed "European and North American Railway" across New Brunswick and Nova Scotia.

1854 - The first two locomotives arrive at the GMA's Sydney Mines operations. They are named *Sydney* and *Halifax*.

1858 - The monopoly of the General Mining Association is broken. A flurry of mining activity follows with more than 30 mines opening in the next 36 years, some with their own network of rails connecting them to tidewater.

1864 - A company called the Sydney and Louisbourg Railway is incorporated but is not activated. Backers include John Jacob Astor III (1822-90) the great American railroad baron.

1865 - A number of short lines are built from the various collieries to ports in the Glace Bay and Port Caledonia areas. Their exposure to the open ocean makes them difficult and expensive to maintain, as are the loading piers with which they connect.

1870 - The International Coal and Railway Company begins to operate a standard gauge railway from Bridgeport to Sydney. This is the earliest attempt to bring a rail link to Sydney harbour and the international piers.

1871 - The Sydney and Louisbourg Coal and Railway Company begins a narrow gauge rail line between the Reserve coal field and Sydney Harbour.

1873 - The Cape Breton Company is formed with the amalgamation of the Glasgow and Cape Breton Coal and Railway Co., the Lorway Coal Co., and the Schooner Pond Coal Co. Frederick Gisborne is one of the driving forces behind the operation. It marks the first attempt to bring a rail terminus to the winter port of Louisbourg.

1878 - The Cape Breton Company encounters financial difficulties, becomes bankrupt, and is sold at public auction. The assets are purchased by a group led by Captain David J. Kennelly. The operation is refinanced, re-organized, and renamed the Sydney and Louisbourg Coal and Railway Company.

1883 - After only a few years of operation, a forest fire destroys a major section of the S&L line. There had been 32 wooden trestles and 35 large wooden culverts along its 32-mile length.

1884 - The Cape Breton Railway Extension Company is incorporated to build a southern line from the Canso Strait to the port of Louisbourg. By 1903, the line covers the 31-mile distance between Port Hawkesbury and St. Peters. It opens for traffic on September 8, but goes no further.

1885 - Sydney and North Sydney are incorporated.

1886 - Men of the General Mining Association's foundry and shops at Sydney Mines build the locomotive *C. G. Swann*. It is barged across Sydney harbour and serves many years at the Victoria Mines operations.

1888 - A survey reveals that the roadway of the Sydney and Louisbourg line has deteriorated to the point where it is unsafe and unusable.

1890 - After a year of political controversy, the trans-island portion of the Intercolonial Railway is completed. The inaugural train arrives in Sydney on October 18. Governor-General Lord Stanley is on board for the ceremony.

1892 - A federal subsidy of \$89,000 is offered for the completion of a railway to link the collieries of eastern Cape Breton with the harbours at Sydney and Louisbourg.

1893 - Henry M. Whitney, a Boston-based industrialist, creates the Dominion Coal Company by amalgamating eight of the island's major coal companies. Collectively, their railroad equipment, including 67 miles of roadway, become known as the Dominion Coal Company Railway.

1894 - Government officials and the Dominion Coal Company sign a contract to subsidize the construction of a railway from Sydney to Louisbourg. The cost is \$3,200 per mile plus land concessions. Hiram Donkin oversees the construction.

Work on the Sydney to Louisbourg line is completed with 39 miles of new tracks. The line links all the major collieries with both seaports. It is the most up-to-date railway in Canada. Its standards of construction are on a par with the newly-completed ICR. A 600-foot coal pier is built at Louisbourg.

1895 - The inaugural run of the S&L takes place on June 17. The date chosen coincides with the 150th anniversary of the 1745 siege of Fortress Louisbourg. The Society of Colonial Wars unveils a monument to honor the soldiers who died at Louisbourg. The two events are combined in a gala celebration. Hundreds ride two special trains to attend the ceremony.

1899 - A new freight pier, later known as the "steel pier" is built at Louisbourg. The Newfoundland ferry *SS Bruce* calls on the winter port with freight and passengers.

1900 - The Dominion Iron and Steel Company steel plant at Sydney begins operations. The S&L gains an important new customer.

1901 - Louisbourg and Glace Bay are incorporated.

1903 - The S&L suffers its two worst disasters in the same year. In the first, a coal train plunges through the open swing bridge at Mira Gut. One man is killed. The second wreck at McAskill's occurs when a work train collides with a coal train. Three men die.

1908 - Special meetings are held in Glace Bay and Sydney with renewed calls for extension of the ICR to Louisbourg, or alternatively for the completion of the southern route from St. Peters to Louisbourg. In May, Cape Breton County Warden H.C.V. LeVatte and Dr. Freeman O'Neil join Cape Breton MPP Dr. Arthur Kendall as delegates to Ottawa in another attempt to get the project completed. It is an election year.

1910 - On September 10, under laws of the Province of Nova Scotia Companies Act, Dominion Coal creates a separate division for its rail operations and incorporates it as a wholly-owned subsidiary to be known as the Sydney and Louisburg Railway Company. It also acquires the Cumberland Coal and Railway Company on mainland Nova Scotia.

1914 - Cape Breton coal and steel production becomes important in the World War I effort. Sydney and Louisbourg play roles as bunkering ports and shippers of war materials.

1927 - The last of the aging wooden hopper cars are weeded out of the S&L system and removed from the line. Those still usable are sold to the Nova Scotia Steel and Coal Company.

1929 - The *North Sydney Herald* reports renewed calls for a completion of the railway from St. Peters to Louisbourg.

1933 - Cape Breton feels the effects of a worldwide depression. Coal production is

down and traffic on the S&L Railway is greatly reduced.

1942 - Cape Breton is a major assembly point for ships of the World War II convoys. Availability of coal is a major reason. In a scramble to meet the almost insatiable demand for fuel, coal trains arrive at local shipping piers, sometimes one every 15 minutes. L.H. Cann's Louisbourg Ship Repair Plant employs 150 refitting warships and freighters including those of the Dominion Coal Company fleet. Many mines are at full production.

1949 - The last steam locomotive is built for domestic use in North America.

1951 - 100 new hopper cars are delivered to the S&L bringing the total fleet to 1050.

1957 - Hawker Siddley acquires DOSCO.

1959 - The S&L line covers 116.03 miles of tracks; yearly freight totals in the range of 4,000,000 tons; 400 people are employed, and there are 31 locomotives on the roster, one of them built in 1891 is still in service.

1960 - The first four diesel locomotives are brought on line by the S&L. Six more are expected to be in operation by the end of the year. The Mira Station is closed. Stationmaster Alex Ferguson ends a 50-year career with the S&L, 44 of those years as agent at the Mira landmark.

1961 - On September 29, Bill-S19 of the Senate of Canada merges the S&L with the Cumberland Railway Company, another division of the Dominion Steel and Coal Company. Engines No. 88 and 90 are the last steam locomotives on the S&L roster. On November 17 they make their last runs, and are then removed from service.

1962 - Coal shipments at Louisbourg decline to the point where the shipping pier becomes uneconomical to operate. It is dismantled and scrapped. The Dosco coal yard supplying domestic fuel to the town closed a year earlier.

1963 - Passenger service on the S&L is discontinued. The order becomes effective in March.

1967 - The Cumberland Railway makes application to the Board of Transport Commissioners of Canada for abandonment of the railway line from Broughton Junction to Louisbourg. It is a distance of about 12 miles. Hearings are held at Louisbourg. The Cape Breton coal industry is collapsing. The Government of Canada commissions Dr. J.R. Donald to write a report on the "Cape Breton Coal Problem." Hawker Siddley withdraws from the coal fields and announces closure of the Sydney steel plant.

1968 - The Donald Report results in government legislation: Bill C-135 (An Act to Incorporate the Cape Breton Development Corporation). There is no provision for the maintenance of the rail line to Louisbourg. It passes through Parliament, and in March, the Cape Breton Development Corporation (DEVCO) becomes a reality. The S&L is folded into the coal division of DEVCO. It is renamed the Devco

Railway. The S&L exists no longer. Within months, the rails to Louisbourg are lifted and sold for their scrap value.

This chronology originally appeared in *Tracks Across the Landscape: the S&L Commemorative History* by Brian Campbell, with A.J.B. Johnston, published in 1995 by Cape Breton University Press.

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APPENDIX THREE: S&L TIMELINE RUBRIC

	<b>3</b>	<b>2</b>	<b>1</b>
<b>Order</b>	Dates were entered on time line in chronological order.	Most dates were correctly positioned.	Dates were mixed and incorrectly positioned.
<b>Data</b>	Sufficient supporting information was included.	Some supporting information was provided.	Insufficient supporting information was provided.
<b>Group Work</b>	The student worked well with group members.	The student worked fairly well with group members.	The student did not cooperate well with group members.

APPENDIX FOUR: GOOGLE MAPS RUBRIC

	<b>3</b>	<b>2</b>	<b>1</b>
<b>Accuracy</b>	Locations are correctly identified and balloons positioned accurately.	Some locations are correctly identified and balloons positioned accurately.	Incomplete - most locations are not correctly identified and balloons positioned accurately.
<b>Data</b>	Each location has two relevant facts mentioned.	Some locations have two relevant facts mentioned.	Locations lack relevant data

APPENDIX FIVE: FIVE MINUTE VIDEO TOUR RUBRIC

	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Content</b>	Includes complete in-depth information depicting journey through town.	Includes enough facts to give readers an understanding of a journey through town.	Some sequence of events included but scant information depicting journey through town.	Incomplete sequence of information depicting journey through town.
<b>Originality</b>	Originality and inventiveness evident in filming.	Originality evident.	Some evidence of originality.	Scant evidence of originality.
<b>Videography</b>	Images are of exceptional quality, in focus and steady. Camera angles are remarkably varied and interesting.	Images are in focus and steady. Camera angles are varied and interesting.	Most of images are in focus and steady. Some camera angles are varied and interesting.	Images are not in focus and shots are very unsteady. Camera angles are not varied and dull.
<b>Storyboard</b>	Excellent storyboard.	Storyboard prepared in advance.	Storyboard prepared but incomplete.	No storyboard.
<b>Oral Commentary Presentation</b>	Very well coordinated with video, very easy to understand, excellent choice of text.	Well coordinated with video, easy to understand, good choice of text.	Somewhat coordinated with video, fairly easy to understand, fair choice of text.	Not well coordinated with video, difficult to understand, poor choice of text.

APPENDIX SIX: MAP ART COLLAGE RUBRIC

	<b>5</b>	<b>3</b>	<b>1</b>
<b>Points of interest</b>	Includes more than one of each: industries, major cities, celebrities, landmarks, wildlife.	Includes one of each: industries, major cities, celebrities, landmarks, wildlife.	Does not include one of each: industries, major cities, celebrities, landmarks, wildlife.
<b>Word tags</b>	Word tags used to identify subjects.	Some word tags used to identify subjects.	No word tags used to identify subjects.
<b>Ten provinces three territories represented</b>	Ten provinces three territories represented.	12/13 areas represented.	Does not represent all provinces and territories.
<b>Effort</b>	Significant effort evident.	Fair amount of effort shown.	Insignificant effort put forth into work.
<b>Design</b>	Imaginative and original arrangement of content.	Good arrangement of content.	Lack of effort evident in arrangement of content.

APPENDIX SEVEN: PICTURE REFLECTION CHART

**Photo Study: Choose a photograph from the S&L Railroad information.**

A) Study the photograph. What was your first impression? Examine it closely and if possible use a magnifying glass or view it in a photo editing program which allows magnification. Make a list of all you see in the photograph.

Persons

Things

Actions

**B) Step 2. Deduction**

List some things you might conclude from the picture.

1

2

3

**C) Record the questions you would want to ask about the picture. Use back of this sheet for additional information.**