

# WORK THROUGH TIME

*Cape Breton Stories of Land & Sea*



## Grade Eight – The Lobster Industry in Cape Breton

Atlantic Canada Curriculum – Specific Curriculum Outcomes (SCO)

### Lesson Plan Based on Work Through Time Stories:

*Bay St. Lawrence Lobster Factory, White Point Lobster Factory* –  
North Highlands Community Museum

*Lobster Fishing and Swordfishing in Main-à-Dieu* –  
Mike Targett

**Overview:** The students will gain an understanding of the lobster fishery and processing through the years.

GRADE EIGHT SCO MATH	<b>B4</b> Apply percentage increase and decrease in problem situations <b>F8</b> Develop and conduct statistics projects to solve problems <b>F9</b> Evaluate data interpretations that are based on graphs and tables
GRADE EIGHT SCO GYM	N/A
GRADE EIGHT SCO ART	<ul style="list-style-type: none"><li>• Creating, Making, and Presenting GCO 1: Students will be expected to explore, challenge, develop, and express ideas using the skills, language, techniques, and processes of the arts.</li><li>• Assess and utilize the properties of various art media and their ability to convey messages and meaning</li></ul>
GRADE EIGHT SCO LANGUAGE	<b>1.4</b> Listen carefully to identify key points in oral presentations, and evaluate the relevancy of supporting details <b>4.1</b> Select texts that address their learning needs and range of special interests

	<p><b>8.1</b> Demonstrate competence in the frequent use of writing and representing strategies to extend learning; to explore their own thoughts and consider others' ideas, to reflect on their feelings, values, and attitudes; and to identify problems and describe logical solutions</p> <p><b>9.1</b> Continue to develop writing forms previously introduced and expand this range to produce, for example, autobiographies, drama, surveys, graphs, literary responses, biographies, illustrations, and reviews</p> <p><b>9.2</b> Consider and choose writing forms that match both the writing purpose (to define, report, persuade, compare) and the reader for whom the text is intended (understand why language choice, organization, and voice used in an essay differs from that used in a media advertisement)</p> <p><b>10.1</b> Build and rely upon a broad knowledge base of how words are spelled and formed; use such knowledge to spell unfamiliar words and expand vocabulary; regularly use resource texts to verify spelling; use punctuation and grammatical structures capably and accurately; use a variety of sentence patterns, vocabulary choices, and paragraphing with flexibility and creativity to engage readers</p> <p><b>10.2</b> Choose, with increasing regularity, the prewriting, drafting, revising, editing, proofreading, and presentation strategies to aid in producing various texts</p> <p><b>10.3</b> Attempt to use various technologies for communicating to a variety of audiences for a range of purposes</p>
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GRADE EIGHT SCO SCIENCE	<ul style="list-style-type: none"> <li>• Analyze factors that affect productivity and species-distribution in marine and fresh water environments</li> <li>• Predict and interpret trends in populations of a marine species from graphical data by interpolating and extrapolating data (210-4, 210-6)</li> </ul>
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GRADE EIGHT SCO SOCIAL STUDIES	<p><b>8.5.1</b> Examine the effects of resource depletion and sustainability in the sectors of energy, mining, forestry, farming, and fishing</p>
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GRADE EIGHT SCO MUSIC	N/A
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GRADE EIGHT SCO TECHNOLOGY	<b>BOC 9.1</b> (Relates to 6.1) operate a wide variety of school media, computer, and other educationally appropriate equipment for learning, communication, and the representation of their learning, independently and safely with teacher supervision
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GRADE EIGHT SCO HEALTH	N/A
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NOVA SCOTIA BOOK BUREAU
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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.

Many resources appropriate for this lesson are available through the Nova Scotia Allocated Learning Resources (ALR) at the Nova Scotia School Book Bureau (NSSBB).

Please visit: [https://w3apps.ednet.ns.ca/nssbb/search\\_alr.asp](https://w3apps.ednet.ns.ca/nssbb/search_alr.asp)

Nova Scotia School Book Bureau, 10 Acadia St, Dartmouth NS B2Y 4H3  
Phone: (902) 424-5516, Fax: (902) 424-0545, E-mail: [nssbb@gov.ns.ca](mailto:nssbb@gov.ns.ca)

SUGGESTED VIDEO RESOURCES
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**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 that 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/>

YouTube Videos:

*The Reason Why Certain People Don't Eat Lobster*

Search for this title to find a funny introduction.

**NS Dept of Education LRT videos:**

Please visit: <http://lrt.ednet.ns.ca/>

*A Tale of Two Fisheries Video # 23499*

Fishermen tell the story of the Maine cod fishery, which has never been worse than the present, and the lobster fishery, which has never been better. Archival footage shows that lobster harvest had crashed fifty year ago, since then a conservation ethic has evolved within the industry. Using aquaculture, cod fishermen have begun to work with scientists to enhance stocks. This program is useful to the Oceans II course, where the focus is the concept of sustainability, and makes connections between habitat conditions and the health and abundance of each stock.

## MUSIC RESOURCES

(1) Donald Angus Beaton

<http://www.celticmusicsite.com/dab/index.htm>

(2) Celtic Music Interpretive Centre

<http://www.celticmusicsite.com/research/links.htm>

## BACKGROUND

In the early 1900s after a market for processed lobster was established, lobster canneries sprang up along the coast of Cape Breton. Although the fishermen didn't get a fair price from the factory owners they, like the coal miners, were tied to selling to the buyers. Individual fishermen had no bargaining power and it was only when

they banded together through the Cooperative movement that they were they able to bargain for a fair price. There were no laws restricting the age of workers so in May and June many students left school to help supplement their families' income by working in the lobster factories.

## IMPLEMENTATION STRATEGIES

### LESSON PLAN ONE: NEWSPAPER ARTICLE

- Approximate lesson time: 1 hour

- Materials needed:

Copy of *Bay St. Lawrence Lobster Factory, White Point Lobster Factory*:

[http://www.workthroughtime.ca/Industrial/Industry\\_North.php](http://www.workthroughtime.ca/Industrial/Industry_North.php)

Copy of *Lobster Fishing and Swordfishing in Main-à-Dieu*:

<http://www.workthroughtime.ca/Rural/Boatbuilding.php>

- After reading over the provided information, create a newspaper article on the lobster canneries mentioned in the articles.
  - 1) Read short news articles on which you can pattern your story.
  - 2) The lead paragraph should be an attention grabber which tells who, what, when, where, and why.
  - 3) The next three paragraphs are to give the details. Quote your sources but never give your own opinion.
  - 4) The last paragraph is the conclusion. Try to be original and entertain your readers.
  - 5) There should be no more than three sentences per paragraph.
  - 6) Include a picture with your story.
  - 7) Think up a catchy headline.
- See Appendix One for Newspaper Article Evaluation Rubric

## LESSON PLAN TWO: CHILDREN'S BOOK

- Approximate lesson time: 2 hours
- Materials needed: Art supplies
- Read carefully some lower elementary children's books to determine vocabulary that is age appropriate. Brainstorm ideas for a story concerning some aspect of the lobster industry. The book may be of any genre: traditional literature, fiction, fantasy, biography, informational, and poetry. Keep in mind the aim is to entertain with words and pictures.
- Illustrations may be hand drawn or photographs from any source. After your final edit, practice reading your book so you will be able to entertain youngsters from the elementary grades.
- Design an attractive cover for your book, which will persuade people to read it.
- See Appendix Two for Children's Book Evaluation Rubric

## LESSON PLAN THREE: LOBSTER CAROUSEL DEBATE

- Approximate lesson time: Several class periods
- Materials needed: Stationary supplies
- Lobster conservation is a controversial topic in the fishing industry. While fishers want to conserve the stocks, they often have views differing from conservation consultants.
- Individual Lobster Fishing Areas (LFA) often have regulations, which range from fishing all year long (in Maine) to a two-month season in the Atlantic Gulf area. Individual LFAs differ on carapace size allowed, trap specifications, female restrictions etc.
- Divide the class into two equal groups, fishers and Conservation Consultants, and have them research background information on the following issues and record the information in their debate organizer. See Appendix Three for Debate Organizer.

Number of traps  
Lobster quotas  
Carapace size  
Duration of season  
Female lobster restrictions  
Trap design  
Fishing license  
Lobster pricing  
Designated conservation areas/fishing zones

- In the following class, after students have completed their research, use the Carousel discussion method to publicize and share opinions.
- One group (Fishers) forms an inner circle (seated or standing) and the other group (Conservation) forms an outer circle facing them. The teacher will announce the topic (from list above), to be discussed. Ask each pair to share their point of view with their partner.
- The teacher will be the director and will allow 3 minutes for discussion of each topic, 90 seconds per student. After three minutes ask the inner circle to rotate clockwise and the outer circle to rotate counter-clockwise. The new pair should repeat the activity discussing a topic the teacher announces before start time. Continue the rotation to the discretion of the teacher.

## LESSON PLAN FOUR: LOBSTER JEOPARDY

- Approximate lesson time: 1 hour to construct, 30 minutes to play
- Materials needed: PowerPoint Jeopardy file, score keeper's sheet, stopwatch for time keeper, 2 bells or 2 buzzers, computer with MS PowerPoint, LCD projector or device to project computer screen for class to view

PowerPoint Jeopardy File:

<http://www.workthroughtime.ca/Educational/index.php>

- Research the American Lobster and use the facts found in the construction of a PowerPoint Jeopardy game. Divide the class into five groups. Each group is responsible for providing answers and questions for one of the categories in the game. Use the PowerPoint template provided.

Catagories:  
Development  
Predators  
Eating habits  
Conservation laws  
Habitat

- Select a host, scorekeeper, and timekeeper and divide class into two teams. The scorekeeper will have a list of responses corresponding to each answer. The timekeeper will make sure responses are within time limits. Click on the *Slide Show* icon to begin.
- Ask a student from the first team to pick a category and point value. Click on that icon. This will show an *answer*. The students on this team will have an allotted amount of time to buzz in and provide the *question*.
- Click the left hand arrow to advance to the next slide and, if a student is correct, award his/her team the points and give that student a chance to pick another category and point value. If the student was incorrect, that number of points will be subtracted from his/her team's total and the control of the board goes to the opposing team.
- If the first team does not have a *question* for the *answer* and the fixed time has expired, the other team can buzz in and provide the *question*. If no team buzzes in, no points are added or subtracted and control of the board is passed to the other team.
- Click on the arrow in the lower left hand corner to return to the game board.

## LESSON PLAN FIVE: VIDEO INTERVIEW

- Approximate lesson time: Extended activity
- Materials needed: Camcorder, video editing software
- Lobster stocks have plummeted and some fishers are walking a fine line between staying with the fishery and selling out. About 100 years ago lobsters were abundant even on the shallow shoreline water. What has caused the decline? Is it over fishing, bad conservation practices or environmental changes?
- Interview a fisher on his/her opinion of the future of the lobster fishery and changes seen during his/her career. Students should prepare in advance so they will

have a basic knowledge of the subject. The following points should be covered.

Boats and gear  
Conservation  
Catches  
Solutions  
Future  
Financial

- Helpful starters for interviews are: “ Tell me more about ...”, “What were you doing when ...”, “ How did you feel about ...”
- Edit the final interview down to five to eight minutes.
- See Appendix Four for Video Interview Evaluation Rubric

### LESSON PLAN SIX: DESIGN CAN LABEL

- Approximate lesson time: 1 hour
- Materials needed: Art supplies, cans
- Package design is a very important part of marketing. It often is the factor that influences consumer’s decisions on purchases.
- Design a label for a can of lobster meat. Select a salmon or tuna sized can to display the label. Logo, ingredients, weight, nutritional information should be included. Choose one or two objects which can be tied into a lobster theme and place them inside the can. During sharing time explain the significance of the label and the items (pictures allowable, objects preferred)
- See Appendix Five for Label Design Evaluation Rubric

### LESSON PLAN SEVEN: BOARD GAME

- Approximate lesson time: Several class sessions
- Materials needed: Art supplies

- Design a lobster theme board game taking into consideration the conditions affecting catches. Research your topic and game design possibilities. Game skill level should be targeted toward a younger audience with whom you will be able to play the game when completed or test during the formation process.

- Keep in mind price fluctuation, loss of gear, weather, fines, fuel and quotas. Write up directions, rules and game pieces. Arrange to team up with a younger class, 4-H or Boy Scouts/ Girl Guides group to showcase your game.

- See Appendix Six for Board Game Evaluation Rubric

### LESSON PLAN NINE: LOBSTER MODEL

- Approximate lesson time: 1 hour, extended activity

- Materials needed: Art supplies

- Making a model is an excellent way to become aware of the structural detail of a subject. Make a lobster model to scale with correct numbers of appendages. Label the body parts and tell their use. Give an explanation of their preferred habitat, diet and molting process.

- Display models and invite younger classes for viewing or explanation. Working cooperatively, groups of students (no larger than 4) could go to younger classes and give an explanation of the lobster and its life cycle.

### LESSON PLAN TEN: MATH PROBLEMS

- A lobster boat can travel 3000 m in exactly 8 minutes. What was the average speed in meters per second?

- John bought a used boat for \$5 375. He had to pay an additional 13 percent of the purchase price to cover sales tax. What is the total amount John paid?

- A fisher works 180 days out of the 365 days in a year. Approximately what percent of the year is he/she working at sea?

- Which measurement is needed to determine the amount of wood needed to cover the floor of a boat? (Circumference, perimeter, area, surface area, volume.)
- Mr. Kyle drives his boat eight km south and then six km east. What was the diagonal distance from his starting point? Draw a diagram and explain your answer.
- 15 girls and 11 boys are in competition to be a helper at the wharf. If a person is selected at random to run an errand, what is the probability that a boy will be selected?
- John entered a draw for a lobster prize 5 times. Only 150 entries were received. What is the probability that John will win the lobster prize?
- The Survey of Lobster Catches cost \$4 each to print. There is a set up cost of \$200 that must be paid regardless of how many surveys are printed. The committee has \$2200 to spend. How many surveys can be printed? Have students solve the problem by using concrete materials and discuss their methods of solving the problem. Express the problem as an equation.
- Using <http://www.glf.dfo-mpo.gc.ca/pe/st/rep-rap/query-e.php?typeE=year> to obtain the numbers for the lobster catches at Baxter's Cove for the years 1984, 1994 and 2004 find the percentage increase or decrease in the catches from one year to the next.
- Using the statistics from <http://www.glf.dfo-mpo.gc.ca/pe/st/rep-rap/query-e.php?typeE=year> construct a Box and Whisker Graph showing the lobster catches at Baxter's Cove from 1984 to 2007. Comment on any trends or make inferences about the results of the graph.

### FOLLOW-UP ENRICHMENT

- Research how a lobster molts. Search for videos of the process.
- Read *The Secret Life Of Lobsters* by Trevor Corson.

## EVALUATION

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

## LINKS TO SUPPORTING INFORMATION

(1) Design a board game

<http://edweb.sdsu.edu/courses/edtec670/boardgame/BoardGameDesignI.html>

(2) Designing a Board Game – Hints and Tips

<http://www.sonypictures.co.uk/movies/zathura/boardgame/hintsandtips.pdf>

(3) The Lobster Conservancy

<http://www.lobsters.org/press/thesun.html>

(4) National Geographic lobster information

<http://animals.nationalgeographic.com/animals/invertebrates/lobster.html>

(5) Lobster links

[http://portlandme.about.com/od/lobsterinfo/Lobster\\_Information.htm](http://portlandme.about.com/od/lobsterinfo/Lobster_Information.htm)

(6) DFO The American Lobster

<http://www.osl.gc.ca/homard/en/index.html>

(7) Baxter's Cove Lobster Hatchery Enhancement Project

<http://www.capebretonlobster.com/>

(8) The Fishermen and Scientists Research Society (FSRS)

<http://www.fsrns.ca/fsrs/>

(9) Lobster Facts

<http://www.lobstermanspage.net/lobstrs/lfacts.html>

(10) Lobster Facts

<http://www.fundylobster.com/lobster.htm>

(11) Coastal Communities Network

<http://www.coastalcommunities.ns.ca/didyouknow.php?cid=2>

(12) Homarus americanus: The American Lobster

<http://www.earlham.edu/~houtmra/BioDiv/biodivlobster.htm>

(13) American Lobster - Pictou-Antigonish Regional Library  
<http://www.parl.ns.ca/lobster/index.htm>

(14) The Secret Life of Lobsters  
<http://www.nhptv.org/wild/lobsterI.asp>

## APPENDICES

APPENDIX ONE: NEWSPAPER ARTICLE RUBRIC
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	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Format</b>	Follows the specified format.	Follows specified format in most areas.	Follows specified format, in some areas.	Does not follow the specified format.
<b>Accuracy</b>	All facts are accurate.	Almost all facts are accurate.	Most facts are accurate.	Article does not give an accurate representation of the story.
<b>Creativity</b>	Creativity very evident.	Good evidence of creativity.	Some creativity is evident.	Creativity not evident.
<b>Who, What, When, Where, Why</b>	Thoroughly answers all five Ws.	Answers five Ws.	Answers some of the five Ws.	Does not answer five Ws.

APPENDIX TWO: CHILDREN'S BOOK RUBRIC

	5	3	1
<b>Content</b>	Well-organized, engaging, appealing images, excellent story line.	Fairly well organized, good images and good story line.	Disorganized, lacks story line and images not well chosen.
<b>Research</b>	Research and preparation evident.	Some research and preparation evident.	Little research and preparation evident.
<b>Level appropriate</b>	Level appropriate for target audience.	Level fairly appropriate for target audience.	Level not appropriate for target audience.
<b>Engaging</b>	Intriguing and attention grabbing.	Interesting	Uninteresting

**APPENDIX THREE: DEBATE ORGANIZER**

<b>Issue</b>	<b>Fisher's Point of View</b>	<b>Conservation Consultant Point of View</b>
Number of Traps		
Lobster Quotas		
Carapace Size		
Duration of Season		
Female Lobster Restrictions		
Trap Design		
Fishing License		
Lobster Pricing		
Designated Conservation Areas/Fishing Zones		

APPENDIX FOUR: VIDEO INTERVIEW RUBRIC

	4	3	2	1
<b>Topics: Boats/gear Conservation Catches Solutions Future Financial</b>	Excellent coverage of all topics.	Most topics covered satisfactorily	Some topics satisfactorily covered.	Insufficient coverage of topics.
<b>Originality</b>	Originality and inventiveness evident in filming. In-depth preparation and research indicated.	Originality evident and the work indicates preparation and research.	Some evidence of originality The work indicates some preparation and research.	Scant evidence of originality, preparation and research.
<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 uninteresting.
<b>Storyboard</b>	Shows advance planning of storyline.	Storyboard prepared in advance.	Storyboard prepared but incomplete.	No storyboard.
<b>Oral Commentary Presentation</b>	Very well coordinated with video,	Well coordinated with video,	Somewhat coordinated with video,	Not well coordinated

	very easy to understand, excellent choice of text.	easy to understand, good choice of text.	fairly easy to understand, fair choice of text.	with video, difficult to understand, poor choice of text.
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APPENDIX FIVE: CAN LABEL RUBRIC

	4	3	2	1
<b>Logo Requirements: name, logo, image and textual information.</b>	Label includes all required information.	Label includes most of the required information.	Label includes some of the required information.	Label does not include all required information.
<b>Text, graphics</b>	Excellent choice of font and graphics.	Good choice of font and graphics.	Fair choice of font and graphics.	Poor choice of font and graphics.
<b>Design/Creativity</b>	Design is impressive.	Design is interesting.	Design is simple.	Design shows lack of effort.

**APPENDIX SIX: BOARD GAME RUBRIC**

	4	3	2	1
<b>Design</b>	Design of project reflects careful thought and excellent planning.	Design of project reflects many good ideas.	Design of project reflects some good ideas.	Design of project does not reflect careful thought and planning.
<b>Ease of Use</b>	The game was played with ease and enjoyed by participants.	The game was easily played.	The game could be played, but it had some design flaws.	The game could not be played due to design errors.
<b>Information</b>	Information very clearly relates to lobster theme.	Information relates to the lobster theme.	Some information relates to the lobster theme.	Information has little or nothing to do with the lobster theme.
<b>Grammar/Spelling</b>	Excellent spelling and grammar.	There were more than 2 grammatical errors.	There were more than 4 grammatical errors.	There were multiple grammatical errors.
<b>Knowledge Gained</b>	All students in group could easily and correctly state 8 lobster facts learned while making the game.	All students in the group could easily and correctly state 6 facts learned while making the game.	Most students in the group could easily and correctly state 4 facts learned while making the game.	Several students in the group could not recall lobster facts learned while making the game.