Learning about evidence and interpretation

Overview
This lesson is one of a series that introduces six historical thinking concepts developed by Peter Seixas of the University of British Columbia. Each lesson supports teachers in using a video to introduce one of the concepts. The videos are available at http://www.tc2.ca/videos.php. The lessons are available in different versions for grades 6-8 and grades 9-12.

This lesson’s written materials and seven-minute Evidence and Interpretation video offer an engaging way to introduce students to the concept of evidence and interpretation using the example of Chinese Canadian contributions to the Canadian Pacific Railway. Students consider how photographs of the “last spike” may be used appropriately and inappropriately as evidence. Interpretations of a telegram sent to Prime Minister Sir John A. Macdonald regarding the deaths of Chinese railway workers are discussed.

Historical evidence and interpretation
History is not simply a description of “what happened.” All we learn about the past comes from clues that have been left behind and discovered, be they artifacts (e.g., tools, photographs, buildings, drawings), documents (e.g., wills, catalogues, posters) or written and oral descriptions. This evidence needs to be critically examined by asking the question, *Is the evidence adequate to support the conclusions reached?* Understanding the sources and limitations of historical evidence is necessary if students are to appreciate the tentative nature of historical knowledge.

Objectives
Students will understand that:

- evidence is information offered to establish a fact or support a position
- evidence can be found in primary and secondary sources
- whether we can trust evidence depends on its reliability
- the validity of evidence depends on whether it is used appropriately, and whether it is relevant to the questions being asked
- interpretations of evidence can be reasonable or unreasonable – the latter if they extend beyond what the evidence itself can reasonably support

This resource was developed with contributions from:

www.tc2.ca
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Suggested activities

BEFORE THE VIDEO

Consider photographic evidence
Invite students to consider the four photographs on the information sheet, *Canadian teens in the 21st century.* Ask students whether evidence in these photos support the notion that “Canadian teens lead wholesome, active lives.” Allow students to discuss their thoughts in small groups.

Assess the quality of the evidence
Ask students how they determined whether the photographs support (or do not support) the statement. In other words, guide them in unpacking the criteria for the quality of evidence. For example:

- Is it reliable or trustworthy? (and how do we know?)
- Is it relevant? (does it answer the question we’re asking)
- Is the interpretation reasonable? (do the conclusions go beyond the evidence?)

Ask students to use the activity sheet, *Historical evidence and interpretation,* to assess the quality of the evidence found in the four photographs. Students should recognize that the photographs represent aspects of the Canadian teenage experience, but that they appear staged, perhaps developed for advertising purposes and they do not represent the diversity of Canadian teenagers or their experiences. Focus on student reasoning and consideration of the nuances of reliable, relevant evidence rather than on any one particular conclusion.

Connect to the lesson
Make the connection between this personal example and history by suggesting that evidence used to support historical ideas and interpretations should be similarly subject to such analysis. Tell students they will be analyzing evidence regarding the attitudes towards Chinese railroad workers in Canada in the late 19th century.

DURING THE VIDEO

Invite students to view the video, *Evidence and Interpretation.* Ask students to relate the decisions they made about the photos of teenagers in Canada to what they learn about evidence in the video. Pause the video at each of the three questions posed by the presenter (at approximately 2:07, 3:50 and 4:27 minutes). Ask students what aspects of evidence and interpretation they considered before the video and what new aspects the video introduced. Provide students with multiple opportunities for viewing at their own pace, if possible.
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AFTER THE VIDEO

Make connections
Give students the opportunity to discuss how the video’s considerations of evidence relate to the photographs of teenagers. Invite students to explore the following questions. Sample responses are provided.

- Are the photographs authentic and to be trusted and how do they decide? (Students are posed, looking at the camera).
- Are the photographs complete? (No, they are not complete. All were taken outdoors, all the people are slim, good looking, smiling and well dressed. Racial bias evident overall.)
- Are the photographs relevant to the questions asked? (No, they do not reflect, or try to reflect, the range of experiences of Canadian teenagers in the 21st century. Some appear to be advertising related.)
- Do the photographs support the interpretations? (Not really. Photographs and writings and perhaps broad studies that reflect the real experiences of Canadian teenagers would be more appropriate evidence.)

Ask students how this understanding of evidence and interpretation might change their thinking about evidence that focuses on Chinese railroad workers in the late 19th century.

Provide context
Introduce the basic context of Chinese railroad workers in the late 19th century:

American contractor Andrew Onderdonk was hired to complete construction of the Canadian Pacific Railway in British Columbia in 1779. Between 1880 and 1881, he hired over 1500 experienced Chinese railroad workers from the United States. Then he began hiring people to transport workers directly from China. In total, over 17 000 Chinese immigrants arrived between 1881 and 1884, of which over 10 000 came directly from China. At the peak of railway building, Onderdonk employed 6000 Chinese workers and 3000 white workers.

Introduce and assess sources of evidence
Primary sources need to be assessed for their believability while secondary accounts need to be evaluated for the proof of their claims. The student activity sheets, Judging the believability of primary accounts and Evaluating the adequacy of secondary accounts, are designed to help students with these kinds of assessments. Provide students with three sources, included as student information sheets in this document, regarding attitudes in late 19th century Canada toward Chinese railroad workers:

- two examples of primary evidence, Housing built for Chinese labourers working on the C.P.R. and Newspaper account of Chinese deaths
- one example of secondary evidence, The National Dream. You may wish to provide students with access to additional primary and secondary evidence regarding attitudes in late 19th century Canada toward Chinese railroad workers.¹

Depending on your students’ experience, you may wish to introduce the two activity sheets through teacher modeling with a gradual release of responsibility to enable independent use.

¹ For additional primary and secondary sources go to http://tc2.ca/sourcedocs/history-docs/topics/chinese-canadian-history.html
Evaluate an interpretation

Once students have assessed the sources, ask them to use the student activity sheet, *Evidence and interpretation*, to evaluate the following interpretation regarding attitudes toward Chinese railroad workers: *In late 19th century Canada, Chinese workers were respected for their contributions to the TransCanada railway.* Inform students they are to critique each piece of evidence for its reliability, relevance and how well it supports the conclusion.

Rewrite the interpretation

Ask students in pairs or small groups to share their conclusions and come to a consensus about the interpretation supported by this evidence. Give students the challenge of rewriting the interpretation so it is corroborated by all the evidence to the satisfaction of the group.

Share interpretations

Invite students to share their rewritten statements with the class and discuss the differences such as the addition of qualifiers. For example, it may be more accurate to say, “Chinese workers were not well respected for the contributions,” than, “Chinese workers were not respected for their contributions,” as there were some people who did respect their contributions.

Choosing terms carefully to avoid ambiguous meanings is another strategy. For example, the term “respect” may be interpreted merely to mean recognition of a contribution or it might have deeper connotations of both recognizing and valuing the contributions.

Assessment for understanding

In order to assess whether students are beginning to develop an understanding of evidence and interpretation, you might use the following activities:

- Listen to student conversations when they are asked to discuss historical evidence. Are they using criteria and evidence in their conversations?
- When students are examining the primary and secondary sources, do they choose powerful and relevant pieces of evidence to support their justifications?
- Examine student use of the activity sheet *Evidence and interpretation*. Have they selected accurate and relevant evidence? Do their ratings reflect an understanding of the evidence?
- At a later date, when students are once again asked to evaluate the believability and adequacy of historical evidence, do they continue to consider the criteria discussed during this lesson?
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TAking IT FURTHER

The following activities might be used to further develop the concept of evidence and interpretation:

- Invite students to examine photos and other primary sources offered in textbooks or online resources. Some questions to ask include: Is this complete? What is missing? Where did the image or document come from? Is the evidence authentic? Does this portray what it is proposed to portray? Is this photo staged? If so, by whom?

- Regularly evaluate textbooks for evidence and conclusions. When conclusions are reached are they backed up with evidence? If so, is the evidence offered adequate? Relevant? Reliable?

- Develop historical arguments. Regularly invite students to use collections of primary and secondary evidence to develop historical arguments; or provide students with a choice of historical arguments and invite them to research sources. (e.g., To what degree is Billy Bishop a hero?)

- Assess competing arguments. Competing interpretations of evidence are common. Provide students with two different textbooks and ask them to evaluate their coverage of a relevant event, with particular focus on their interpretations of the evidence.

2 A wide variety of Canadian history primary and secondary documents is available at http://tc2.ca/sourcedocs/
Canadian teenagers in the 21st century

As these photographs show, Canadian teenagers lead wholesome, active lives.

1. [Image of teenagers sitting on grass]

2. [Image of teenagers skateboarding]

3. [Image of teenagers jumping in the air]

4. [Image of teenagers studying in a park]
**Historical evidence and interpretation**

Do the photographs support the notion that “Canadian teens lead wholesome, active lives according to the following criteria?

<table>
<thead>
<tr>
<th>Photograph 1</th>
<th>Is the evidence reliable?</th>
<th>Is the evidence relevant to the question being asked?</th>
<th>Is the interpretation reasonable?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photograph 2</td>
<td>Is the evidence reliable?</td>
<td>Is the evidence relevant to the question being asked?</td>
<td>Is the interpretation reasonable?</td>
</tr>
<tr>
<td>Photograph 3</td>
<td>Is the evidence reliable?</td>
<td>Is the evidence relevant to the question being asked?</td>
<td>Is the interpretation reasonable?</td>
</tr>
<tr>
<td>Photograph 4</td>
<td>Is the evidence reliable?</td>
<td>Is the evidence relevant to the question being asked?</td>
<td>Is the interpretation reasonable?</td>
</tr>
</tbody>
</table>
Primary evidence A: Housing built for Chinese labourers working on the C.P.R.

Photograph taken in 1883 of housing built for Chinese Workers by the Canadian Pacific Railway in Fraser-Cheam, B.C.

Image I-30869, Accession Number: 198401-006, 1883, courtesy of Royal BC Museum, BC Archives.

From the History Doc: Chinese Canadian life on the railway
http://tc2.ca/sourcedocs/history-docs/topics/chinese-canadian-history/chinese-canadian-life-on-the-railway.html
Primary evidence B: Newspaper account of Chinese deaths

Excerpt from an 1883 newspaper article that discusses the lack of medical care for Chinese workers on the C.P.R.

Here in British Columbia along the line of the railway, the Chinese workmen are fast disappearing under the ground. No Medical attention is furnished nor apparently much interest felt for these poor creatures. We understand that Mr. Onderdonk declines interfering, while the Lee Chuck Co. (labour contractors), that brought the Chinamen from their native land, refused, through their agent Lee Soon, who is running the Chinese gang at Emory, to become responsible for doctors and medicine.

Secondary evidence: The National Dream


Chinese coolies ... could be employed for one dollar a day. In addition, they did not require all the paraphernalia of a first-class camp. The coolie was prepared to move about in the wilderness, set up his own camp and pack all his belongings, provisions, and camp equipment on his back. Michael Haney, who went to work for Onderdonk in 1883, discovered that it was possible to move two thousand Chinese a distance of twenty-five miles and have them at work all within twenty-four hours.

Many inflammatory incidents occurred because of accidents along this line, for which the Chinese blamed the white foremen. On one such occasion, about ten miles below Hope, a foreman named Miller failed to give his gang warning of a coming explosion; a piece of rock thrown up by the subsequent blast blew one coolie’s head right off. His comrades took off after Miller, who plunged into the river to save himself .... Deaths appeared to happen oftener [sic] among the Chinese labourers than in the white group.

### Judging the believability of primary accounts

<table>
<thead>
<tr>
<th>Adequate access to information: Was the author in a well-informed position to observe or experience the event?</th>
<th>Relevant information</th>
<th>Conclusions about believability</th>
</tr>
</thead>
<tbody>
<tr>
<td>No conflict of interest: Is there an obvious conflict of interest that might bias the account?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal consistency: Is there consistency among the facts included in the account?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistency with other information: Does the account support or oppose other accounts?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Overall conclusion**

- Highly believable
- Probably believable
- Questionable
- Not at all believable

**Explanation**
### Evaluating the adequacy of secondary accounts

<table>
<thead>
<tr>
<th></th>
<th>Strengths regarding adequacy</th>
<th>Questions and concerns about adequacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Complete account:</strong> Does the account offer a generally full account the event?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Credible sources:</strong> Is the account based on accurate and trustworthy sources of information?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reasonable conclusions:</strong> Does the account arrive at conclusions that are appropriate given the amount and nature of the available historical evidence?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Balanced perspective:</strong> Does the account fairly represent key viewpoints of the events?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Overall evaluation of the account:

<table>
<thead>
<tr>
<th>Inadequate</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Very adequate</th>
</tr>
</thead>
</table>

#### Explanation:

[Blank space for explanation]
Evidence and interpretation

Interpretation: *In late 19th Century Canada, Chinese workers were respected for their contribution to the TransCanada railway.*

Rate each piece of evidence according to the three criteria using the following scale and provide brief explanations for your rankings:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not support the interpretation at all</td>
<td>Completely supports the interpretation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evidence</th>
<th>Evidence</th>
<th>Evidence</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reliable?</strong>&lt;br&gt;<strong>Explanation:</strong></td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>Relevant?</strong>&lt;br&gt;<strong>Explanation:</strong></td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>Supports interpretation?</strong>&lt;br&gt;<strong>Explanation:</strong></td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>Considering all three factors above, is the evidence adequate to support the interpretation?</strong></td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

Rewrite the interpretation so at least three pieces of evidence support it: