

Inquiry-Based Learning

"*Mavericks: An Incorrigible History of Alberta*" represents history by depicting the voices, opinions, and experiences of individuals important to the development of Alberta's character and spirit. "*Mavericks*" provides a glimpse into the often contradictory and eccentric nature of Alberta as an idea and a place. These resources will provide contextual information about the individuals and the collections, allowing educators to utilize them to create a dynamic teaching and learning process where students will delve deeply into "real" history, becoming historians and deep thinkers, attempting to uncover the genuine "story" of the Alberta Mavericks.

The site will present nationally significant stories of the important people and events that have shaped the identity of Alberta. Over 545 images, audio, and video of historical materials have been digitized to greatly increase the access to Glenbow's collections and information resources on the history of Alberta and its role in the development of Canada.

What is Inquiry-Based Learning?

Inquiry-based learning, in the context of *Mavericks: An Incorrigible History of Alberta*, encourages students to undertake the process of a historical investigation and critically explore and assess their findings. The procedure is similar to how an actual historian would approach developing an understanding of historical information or artifacts, having to interpret and construe their meaning to the best of their ability. The social science history is just that, a subjective interpretation of the evidence available that may be disputed and argued by other people in the field.

Students, while undertaking historical inquiry, assume the role of a historian and try to search for evidence, review and analyze those sources, draw conclusions about those historical artifacts or events, and present and defend their inferences with other groups of "historians." Students become drawn into their own learning by formulating their own questions and then constructing their own new meanings and understandings in attempting to answer their question or generate a solution. Finally, as a historian might write and publish a paper on their findings, students will need to present their results in an appropriate manner, allowing others to evaluate and examine their conclusions.

How you engage in historical inquiry will depend on the age, abilities, and interests of your students, the amount of time available, other resources

available, how it needs to be structured for a specific classroom, and the desired outcomes, products, and learning. Historical inquiry attempts to get to the “essence” of the specific curricular outcomes, allowing students to have choice in the topic(s) they examine, the process they undertake, and how they represent their learning and new understandings. By using a broad-based, open-ended “essential question,” teachers allow for different methods to be used by different individuals or groups as they attack their query.

Inquiry-based learning is an element of all areas in the Alberta Program of Studies where students learn and use skills that may be transferable to daily life outside of their school. Teachers become facilitators of the learning process rather than disseminators of knowledge. The new Alberta Social Studies Program of Studies was designed to allow students to question, reflect on, and consider different perspectives on historical issues and points of view. The curriculum was created to develop students who can work and problem-solve independently, as well as create new knowledge and understandings rather than merely re-stating the same information they researched. Thus, research is not done just for the sake of doing research and presenting it, but research takes place for the larger purpose of exploring and answering an authentic, real world question.

Processes of metacognition become a major piece of the puzzle of education, where students learn how to learn and evaluate their process and results. As in real life, they will be working with challenges and questions that do not have a definite or easy answer, forcing them to develop and modify a procedure for their search for explanations and solutions for their problem. The development of these types of skills will assist students in dealing with problems in everyday life and prepare them for lifelong learning, further studies, and the future world outside of school.

What Does an Inquiry-Based Learning Classroom Look Like?

Inquiry-based learning within a classroom is really about seeing a transformation take place in the way students learn and work together. The manner in which content is presented, the process students will work through, and how the teacher interacts with students are made meaningful and real for the learners, as compared to presenting information and testing using knowledge questions. An inquiry-based classroom encourages:

- authentic problems and explorations within the bounds of the curriculum that have relevance to the real world outside the school walls;
- students taking genuine ownership of the learning process;
- student curiosity in asking questions that are meaningful to them, thus generating their own enthusiasm and excitement;
- student findings to be discussed, interpreted, reflected upon, and deliberated upon;

- teachers acting as learners also, where they collaborate right along with the students and interact more often on an individual or small group basis;
- teachers facilitate the learning process through discussion, support, guidance and monitoring;
- experts from the community and the greater society, such as historians or other social scientists, are involved with the inquiry;
- students use ICT to approach or solve a problem in a manner that is better than it could be done without using technology;
- evaluation is used as a tool throughout to increase learning, allowing students to create evaluation criteria, set new goals and directions, reflect upon the process, and re-evaluate; and
- learning may go in a different direction than anticipated at the beginning of the inquiry.

The Inquiry-Based Learning Process

Inquiry-based learning is really about seeing a transformation take place in how students learn. There is no one right process that all teachers will use in their classrooms, although most have very similar elements involved. The inquiry-based learning process is student-driven using open-ended, broad-based questions of study. It allows students to construct their own understandings through examining, discussing, working on challenging problems and dealing with competing notions and points of view.

Students will observe, discuss, ponder, research, measure, assess, reflect, evaluate, and communicate their new information and understandings to fellow learners, parents, and community members, and experts in the field of study. Inquiry-based learning allows students to go beyond a surface examination into a deeper understanding of the issues and significance surrounding a specific topic.

Alberta Education has created the *Focus on Inquiry* document, which was created to reflect changes in curriculum, the way students learn and work, technology integration in classrooms, research findings, and the processes in the world of work. The document represents one approach toward using inquiry-based learning in your classroom, and should be modified depending on the needs of students and teachers.

The *Focus on Inquiry* document outlines a non-linear, systematic process model that involves the following phases.

- **Planning** – involves the exploration and identification of a topic area as well as the development of a plan for their inquiry. Students will also determine evaluation criteria for both the process and final representation.
- **Retrieving** – involves the planning and collecting of data and information for the inquiry and the development of strategies that enable students to use ICT effectively.

- **Processing** – involves the evaluation and interpretation of data and information collected by recognizing and evaluating bias in different sources. Students will determine if the question needs to be re-focused or if new questions will require the inquiry to be modified.
- **Creating** – involves creating and revising the final product that will communicate the findings of the inquiry to the audience.
- **Sharing** – involves the sharing of new knowledge and understandings with a particular audience.
- **Evaluating** – involves evaluating their own inquiry process using the criteria that was established in the beginning phases and providing constructive feedback that would enable improvement in the future.
- **Reflection** - takes place throughout the whole process as students make time to look back at the questions, process, and direction of the inquiry. They may revise what they have done or decide to go forward in the intended direction.

A PDF version of the full *Focus on Inquiry* document is available on the Alberta Education Web site at:
http://www.learning.gov.ab.ca/k_12/curriculum/bySubject/focusoninquiry.pdf

How Do I Use Essential Questions in Inquiry-Based Learning?

Essential questions should attempt to get at the “core” or the “essence” of the topic, pushing students to investigate and critically assess evidence and different points of view in order to make their own decisions and conclusions. An essential question should trigger student (and adult) curiosity, yet not require that one “right” answer that can be found in a textbook. Students will be pressed to use higher-order thinking skills to analyze, synthesize, and evaluate their resolutions to the question.

For example, the essential question

“Was the treatment of the Chinese railway workers fair?”

may be examined using historical, cultural, ethnic, racial, and modern perspectives. There are many different possible ways to approach the question, as well as a continuum of possible positions or opinions or stances.

A good essential question should be pertinent to curricular objectives and outcomes, open-ended, broad-based, integrate curricular subject areas, initiate student curiosity, and be a significant question that someone in the real world, such as a historian or scientist might investigate.

A number of essential question are available as a starting point that pertain to each specific *Mavericks: An Incurable History of Alberta* theme area, as well as general essential questions that would encompass the use of the whole

Mavericks resource. These may be modified or even spark teachers or children into creating their own essential questions.

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Resources for Inquiry-Based Learning

Note: The websites recommended below are primarily English language websites.

- Focus on Inquiry – An Alberta Education document that describes one instructional model for implementing inquiry-based learning in the classroom.
http://www.education.gov.ab.ca/K_12/curriculum/bysubject/focusoninqiury.pdf
- Inquiry: Thoughts, Views, and Strategies for the K-5 Classroom
<http://www.nsf.gov/pubs/2000/nsf99148/htmstart.htm>
- FNO.org Article – “From Trivial Pursuit to Essential Questions”
<http://www.fno.org/feb01/pl.html>.
- Filling the Tool Box: Classroom Strategies to Engender Student Questioning
<http://www.fno.org/toolbox.html>
- Galileo Educational Network Association
<http://www.galileo.org/>
- Galileo Educational Network Association – Essential Questions
http://www.galileo.org/tips/essential_questions.html
- The Inquiry Page – Learning Begins with Questions
<http://inquiry.uiuc.edu/>