

Indigenizing the Curriculum

Design Plan

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Design Plans

Topic: Explain the importance of indigenizing Ontario's high school biology curriculum

Brief Description

The Ministry of Education in Ontario has asked the Ontario Institute of Studies in Education (OISE) to create a mandatory two-day training on indigenizing the curriculum for Ontario teachers. To open the training, a 30-minute module will cover the importance of indigenizing the high school biology curriculum. Current high school biology teachers should be able to explain the importance of indigenizing the curriculum after completion. The module is intended to prepare teachers for the speeches and workshops. Teachers' pre-conceived notions and attitudes towards Indigenous knowledge may affect the design.

Business Need: To comply with regulations set by the Ministry of Education.

Deadline: December 10, 2019 at 5:00 pm

Budget: \$0.

Format of the Program

The requested course was intended to be live. Due to the potentially controversial and heavy topic, this format will allow for discussion or clarification of material with the instructor in the moment. This is particularly important as it will address issues before teachers experience the following speakers and workshops. As well, it will allow for interactive activities that will be designed to help learners achieve the learning objectives.

Learners will have expectations for a live format. Table 1 summarizes these expectations.

Table 1: Expectations of a live program format (Carliner, 2015)

Characteristic	Learners expect...
Type of material	<ul style="list-style-type: none"> • Background concepts to be presented • Procedures and demonstrations • Opportunities to practice and receive feedback • Activities and discussions
Structure of material	<ul style="list-style-type: none"> • An introduction to the course through a preview and summary of the learning objectives • Material to be divided into manageable units • Feedback or assessments following each unit • An evaluation at the end of the course • Additional resources to continue learning
Communication style	<ul style="list-style-type: none"> • Clear language • Definitions of new or ambiguous terms • Supportive and encouraging learning environment

Other • Time for questions and support from the instructor

Communication Medium of the Program

Since the course will be part of a 2-day training program, staying with the requested face-to-face medium makes sense. Teachers will already be taking time off and the facilities will be provided. I considered the virtual classroom option for a couple of benefits including that learners tend to feel more forthcoming during discussions and that the course could be held ahead of time to allow for time for the learners to reflect. However, time will be built into the design for learners to receive extra help and the instructors will be proficient in creating a safe learning environment. As well, the instructors will be better able to monitor each learner's engagement with the course.

The advantages and disadvantages of the face-to-face medium are listed below (Table 2).

Table 2: Advantages and disadvantages of the face-to-face medium (Carliner, 2015).

Advantages of the medium	Disadvantages of the medium
<ul style="list-style-type: none"> • Time and costs for development are minimized • The instructors have flexibility to alter the material based on the learners – they may provide clarifications and answer questions when needed • There is less to adjust if the materials need to be updated • Allows for better relationship-building opportunities • Learners have more accountability • Removes the heavy reliance on technology needed for a virtual classroom and potential issues 	<ul style="list-style-type: none"> • The instructor's ability to adapt the materials may result in different or inconsistent offerings <p>Typically travel costs, time off work, and expenses are listed as disadvantages however, these do not apply for this course as it is part of a 2-day training.</p>

Instructional or Teaching Strategy

The course will follow a classical instructional strategy, with elements of discovery learning where appropriate. The classical approach is best suited for courses with material that needs to be transferred in its original state (Carliner, 2015). This will be important given the amount of fact-based information in this course. The design will incorporate interactive activities and/or discovery learning into each unit to maximize the course's effectiveness (Carliner, 2015).

Structure of the Program

Note: Detailed information of the front matter, units, and back matter will follow Figure 1.

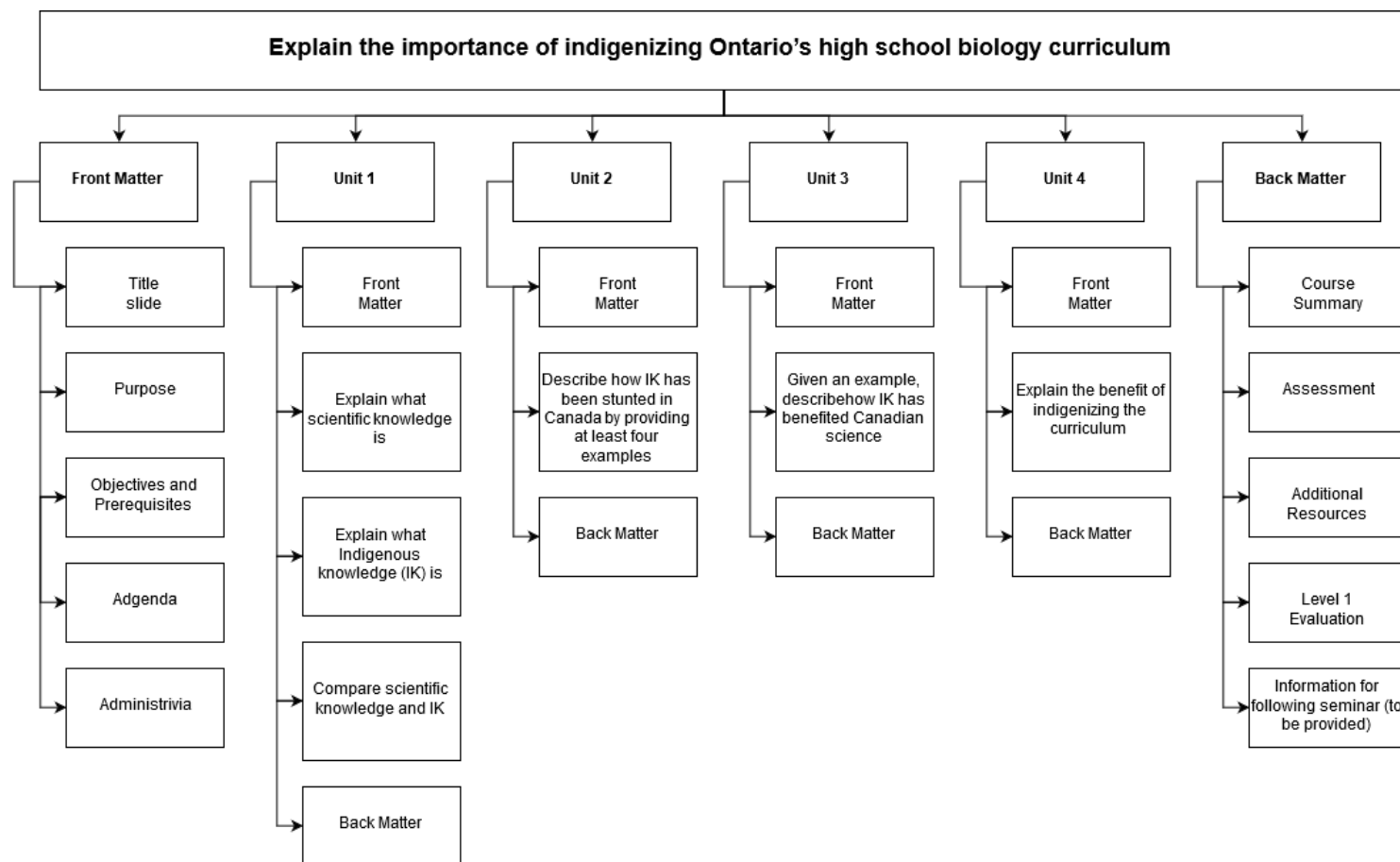


Figure 1: Structure of a program to enable Ontario high school biology teachers to explain the importance of indigenizing the curriculum.

Course Front Matter

- Title slide
- Purpose
- Objectives and Prerequisites (from needs assessment)
- Agenda
- Administrivia (i.e., washrooms, introductions, cell phone policy)

Unit 1

Purpose

The purpose of this unit is to review what constitutes scientific knowledge and introduce learners to indigenous knowledge. Investigating how both knowledge systems are constructed and comparing them will help learners achieve the objectives.

Explaining what scientific knowledge is will open the course to better facilitate the comparison.

Main and Supporting Objectives

- Explain what scientific knowledge is
 - Define the term “Scientific method”
 - Describe how scientific knowledge has been accumulated
- Explain what indigenous knowledge is
 - Define the term “Indigenous knowledge”
 - Describe how Indigenous knowledge has been accumulated
 - Describe how Indigenous knowledge is subjective
 - Describe how Indigenous knowledge is holistic
- Compare scientific and indigenous knowledge
 - Describe similarities
 - Describe differences

Instructional Strategy of the Unit

Classical approach – the instructor will facilitate a review activity of scientific knowledge. Next, they will facilitate a similar activity for learners to reflect on a pre-work video (TED Talk covering how indigenous knowledge is accumulated). Finally, learners will compare the two knowledge systems.

Outline for the Unit

- Front matter (Introduction slide and objectives)
- Interactive review of scientific knowledge to gain learner’s attention
- Interactive review of indigenous knowledge from the pre-work video
- Interactive comparison of the knowledge systems and debrief
- Back matter (summary of the unit)

Unit 2

Purpose

The purpose of this unit is for learners to acknowledge and describe how indigenous knowledge has been stunted in Canada.

Main and Supporting Objectives

- Describe how indigenous knowledge has been stunted in Canada by providing at least four examples
 - Describe at least two purposes of the Indian Act in relation to indigenous knowledge
 - Describe at least two purposes of residential schools
 - Describe the effects of the Indian Act and residential schools by providing at least two effects of each

Instructional Strategy of the Unit

Classical approach – the instructor will facilitate a discussion surrounding the main historical events that have stunted indigenous knowledge in Canada. The discussion will include elements of lecture within it to ensure key events and concepts are covered.

Outline for the Unit

- Front matter (instruction slide and objectives)
- Engage learners in the material through a discussion-lecture hybrid
- Back matter (summary)

Unit 3

Purpose

The purpose of this unit is to provide learners with examples of how indigenous knowledge has and has continued to benefit Canadian science.

Main and Supporting Objectives

- Given an example, describe how indigenous knowledge has benefited Canadian science
 - Given an example, identify the novel knowledge the indigenous community had
 - Given an example, identify how the researchers used the knowledge
 - Given an example, identify how the knowledge propelled their research forward

Instructional Strategy of the Unit

Discovery learning – learners will be given a case scenario (different per group) to analyze and present back to the larger group.

Note: this design will allow time for the instructors to address individual student's needs when not assisting the groups with the activity.

Outline for the Unit

- Front matter (introduction and objectives)
- Brief introduction to the activity
- A case scenario for the learners to analyze
- Group presentations and debrief
- Reinforce learning material

- Back matter (summary)

Unit 4

Purpose

The purpose of this unit is to enable learners to explain what benefits indigenizing the curriculum brings to indigenous and non-indigenous students.

Main and Supporting Objectives

- Explain the benefit of indigenizing the curriculum
 - Explain how true reconciliation requires an informed population
 - Describe how it helps Indigenous students
 - Describe how it helps non-Indigenous students

Instructional Strategy of the Unit

Classical approach – the instructor will engage students in defining the term reconciliation and a discussion around what true reconciliation means. The instructor will then facilitate an activity where learners will build a visual representation of the benefits for their students from a list of benefits.

Note: this design will allow time for the instructors to address individual student's needs while others create the visual representation.

Outline for the Unit

- Front matter (introduction slide and objectives)
- Brief introduction
- Engage learners in defining the term reconciliation
- Discuss what reconciliation truly means
- Debrief discussion and introduce next activity
- Facilitate an activity where learners create a visual poster of the benefits of indigenizing the curriculum for their students
- Debrief the activity by having some learners share how it will benefit their students
- Back matter (summary)

Course Back Matter

- Course Summary
- Assessment
- Additional Resources
- Job Aid
- Level 1 Evaluation
- Information for the following seminar (to be provided)

* Though a certificate is typically provided, learners will receive one for the entire 2-day training rather than the individual components

References

Carliner, S. (2015). *Training design basics* (2nd ed). Alexandria, VA: ATD Press.