ADULT BASIC EDUCATION IN BRITISH COLUMBIA: AN INVESTIGATION OF THE POSSIBLE IMPACTS OF THE MINISTRY OF EDUCATION'S NEW K-12 CURRICULUM CHANGES

Prepared for the British Columbia Council on Admissions and Transfer

Prepared by Kyle Beres under the contracted supervision of Allison Alder

April 2019

Table of Contents

Executive Summary

This report, funded by the British Columbia Council on Admissions and Transfer (BCCAT), was triggered by the desire of Adult Basic Education (ABE) practitioners to ensure their post-secondary learners are in no way disadvantaged by the British Columbia (BC) Ministry of Education's (MoE) impending changes in the curriculum for Kindergarten through grade 12 (K-12). ABE practitioners recognize that these changes could result in a divergence between the curriculum of ABE post-secondary courses and K-12 courses and instruction. In order to best serve ABE learners, there needed to be an assessment of and response to the changes.

The new MoE curriculum will be fully implemented into BC schools in September 2019. Investigating the differences between the new K-12 and ABE pathways will provide the information necessary to develop a coordinated approach for ABE programs, by assessing and responding to the changes.

The goals of this report are:

a) to identify the MoE K-12 curriculum changes;

b) to compare the content of courses in the new MoE curriculum to the content of post-secondary ABE courses, as published in *Adult Basic Education: A Guide to Upgrading in British Columbia's Public Post-Secondary Institutions: An Articulation Handbook 2018/19 Edition* (the *Articulation Handbook*);

c) to determine the degree of similarity between the two curricula; and

d) to generate recommendations, including an implementation plan.

ABE in British Columbia post-secondary education is part of the Ministry of Advanced Education, Skills and Training (AVED). ABE articulates its own courses, with learning outcomes for each level presented in the *Articulation Handbook*. 80% similarity of content between ABE courses in the PSE system and in the MoE's curriculum is used as the standard to determine course transferability.

The changes to the MoE's curriculum include:

- an emphasis on deeper, inquiry-based learning with a focus on the foundational skills in numeracy and literacy;
- greater flexibility for teachers to personalize learning;
- the inclusion of Indigenous knowledge and perspectives in all subjects and grades;
- new core competencies including communication, creative thinking, critical thinking, positive personal and cultural identity;
- an emphasis on personal awareness and responsibility, and social responsibility; and,
- -a structural change which separates learning outcomes into big ideas (understand), curricular competencies (do), and content (know)
- [adapted from https://curriculum.gov.bc.ca/curriculum/overview]

Within this project, the curricula comparison process included a direct comparison of nine courses: one each from English, Mathematics, Social Science, General and Applied Science, Biology, Chemistry, Physics, Computer Studies, and Education and Career Planning. The comparison was undertaken in consultation with subject area experts who work within BC school districts and within the MoE. The outcomes within each MoE course and each ABE course were classified as similar, only in ABE, or not present in ABE. This comparison allowed for the creation of graphs showing the percentage of similarities between comparable courses.

This report recommends that:

- ABE continue to use the standard of 80% similarity for ABE and MoE courses to be transferable;
- ABE representatives attend the relevant post-secondary articulation meetings to ensure prerequisite curriculum remains in ABE courses;
- someone is hired to complete the comparison of all ABE courses, from Fundamental to Provincial levels;
- the *Articulation Handbook* be consistently formatted;
- the *Articulation Handbook* includes overarching goals for all ABE learners;
- tall courses, subjects, and levels are reviewed with an Indigenous lens with the intent of deeper inclusion of Indigenous perspectives and ways of knowing;
  the tables in the *Articulation Handbook* of ABE courses authorized as equivalent to MoE courses and for credit within MoE be revised; and,
- another study be completed in three to five years to reassess the degree of similarity between MoE courses and ABE courses, as the MoE refines its curriculum.

Finally, this report includes a recommended workflow diagram for course comparison and a timeframe for the work contained within the diagram to be completed.

Part 1: Background

Due to variations in language between the MoE curriculum and ABE curriculum, outcomes terminology will be used throughout this document to refer to Prescribed Learning Outcomes in the *Articulation Handbook* and to Learning Standards in the MoE curriculum.

What is the ABE System?

British Columbians have had access to ABE courses and programs since the early 1960s to "support learners to achieve one or more of the following goals: high school graduation, further education, employability skills, and life management skills" (Ministry of Advanced Education, Skills and Training [AVED], 2018, p. 6). These programs include courses in basic literacy and numeracy through to provincial (grade 12) and post-secondary levels, as well as English Language courses, employment preparation and Adult Special Education for students over the age of 18.

> These programs provide flexible learning opportunities for adult learners and are designed for the large number of British Columbians in need of basic skills or language training to participate fully in society and the economy. ABE programs in the PSE system are offered in a variety of formats ranging from semester classes to self-paced individualized instruction, including distance (online) education and community outreach with tutoring assistance. Programs are fully articulated, allowing for course transferability around the province. Adult learners may choose to take courses as prerequisites for other programs in the PSE or work toward their [British Columbia Adult Graduation Diploma]. (Ministry of Advanced Education, Skills and Training, 2018, p. 6).

The ABE program framework has four levels: Fundamental, Intermediate, Advanced, and Provincial. ABE courses at each level are considered parallel to the K-12 grade levels of Grade 9 (Fundamental), Grade 10 (Intermediate), Grade 11 (Advanced), and Grade 12 (Provincial). However ABE courses are unique in their suitability and flexibility for the adult learner and adult learning environment. An ABE learner may take one or many courses, according to their needs and capacity, and they may take courses concurrently across multiple levels. ABE practitioners take guidance on course and program structure and content from the *Articulation Handbook*, which is collectively adapted by ABE practitioners each year and published by AVED. The *Articulation Handbook* outlines well-defined learning outcomes for each subject and at each level. The work of ABE articulation is coordinated by the ABE Articulation Steering

Committee but undertaken by eight subject-specific working committees. Generally, ABE does not articulate courses to match the MoE's curriculum. However, for specific courses that are authorized as equivalent to MoE courses, learning outcomes in ABE courses are expected to match at least 80% of those in MoE courses. The current equivalencies are outlined in the 2018 *Articulation Handbook* on p. 22.

ABE Articulation

ABE articulation is completed yearly

> to ensure learners have access to quality courses, receive appropriate credits and are able to transfer easily among publicly-funded colleges, universities and institutes in [BC]. Articulation also involves liaison with the school system's ABE programs to facilitate transfer of students back and forth between school district and college ABE programs (Ministry of Advanced Education, Skills and Training, 2018, p. 10).

The goals of ABE articulation, as stated on p. 10 of the 2018 *Articulation Handbook,* are:

1. to facilitate the transfer of students from one educational institution to another;
2. to facilitate entry of students into further education programs;
3. to lend credibility to the ABE Certificates/Diplomas for students seeking employment or further education;
4. to provide a common terminology throughout the province for levels of achievement;
5. to provide for exchange of information;
6. to set and maintain learning outcomes which respect the autonomy of colleges and institutes to create equivalent course content;
7. to set course requirements for diplomas and certificates;
8. to assist, through working committees, in the development of guidelines for the content of courses identified for different levels of certification;
9. to provide a forum for the discussion of ABE issues;
10. to provide a common voice when addressing external bodies; and,
11. to encourage development and exchange of curriculum materials.

The tasks of a Working Committee, as stated on p. 13 of the 2018 *Articulation Handbook*, are

1. to review college and university course outlines at the respective levels;

2. to come to a consensus on learning outcomes derived from existing courses at each level of the framework;
3. if appropriate, to review related curriculum which may affect articulation, i.e. MoE curriculum;
4. to articulate college and university courses with the described learning outcomes and produce a provincial course transfer guide;
5. to make recommendations, through the Working Committee chairperson, to the Steering Committee about such things as curriculum development and course development;
6. to understand that course articulation (Advanced & Provincial Levels) with the universities and institutes is ultimately the responsibility of each college and university;
7. understands that the process of articulation is primarily one of the exchange of information and setting of learning outcomes, and not one of prescription of length of course, instructional methodology or materials; and,
8. establishes and maintains links with articulation committees in other disciplines whenever feasible, on issues related to university transfer, career/ technical/vocational areas, K-12, and Continuing Education ABE.

What is the MoE?

The BC MoE is tasked with the education of approximately 553,000 public school students, 81,000 independent school students, and over 2,200 home-schooled children enrolled each school year in Kindergarten through Grade 12 (K-12) (Government of British Columbia, 2018f). During their time within the MoE school system, students gather "the knowledge, skills and abilities needed to contribute to a healthy society and a prosperous and sustainable economy" (Government of British Columbia, 2018f). According to the School Act, a student is eligible to enroll in an educational program to begin in the year they turn five (Government of British Columbia, 2018d) and remain in school until the end of the school year in which they turn nineteen (Government of British Columbia, 2019b).

To provide students in the MoE system with the best possible education, a collective mandate was created to develop the "educated citizen". According to the BC Graduation Program Policy Guide (2018b), educating the educated citizen includes:

• Intellectual Development – to develop the ability of students to analyze critically, reason and think independently, and acquire basic learning skills and bodies of knowledge; to develop in

students a lifelong appreciation of learning, a curiosity about the world around them, and a capacity for creative thought and expression.

• Human and Social Development – to develop in students a sense of self-worth and personal initiative; to develop an appreciation of the fine arts and an understanding of cultural heritage; to develop an understanding of the importance of physical health and well-being; to develop a sense of social responsibility, acceptance and respect for the ideas and beliefs of others.

• Career Development – to prepare students to attain their career and occupational objectives; to assist in the development of effective work habits and the flexibility to deal with change in the workplace (p. 2).

Rationale for Curriculum Change

> As with many jurisdictions, BC refreshes its approach to school curriculum every ten or fifteen years, and this [new MoE curriculum] replaces an approach introduced in the very early 2000s…To date, the BC school curriculum has not significantly deviated from the North American norm…For most young people in BC, their school experience is a conventional K-12 progression culminating in provincial examinations…Over the last few years, there has been a committed attempt to change the system broadly and fundamentally, leading to the implementation of a new curriculum framework across the entire school system (St. Clair, 2018, p. 1).

The overarching goals of the current changes to the BC K-12 curriculum include:

- increased representation of Indigenous culture and knowledge;
- new forms of assessment;
- reduced prescriptiveness and increased flexibility of both the curriculum and the path to graduation;
- support for interdisciplinary, increased innovation; and,
- improved alignment of evaluation and curriculum.

New MoE Curriculum Implementation Timeline

- Full transition to the new K-9 curriculum in the 2016/17 school year.
- Full transition to the new Grade 10 curriculum in the 2018/19 school year.
- Full transition to the new Grades 11 & 12 curriculum in the 2019/20 school year.

Pathways to Grade 12 Graduation

ABE students can take courses for graduation in both the MoE system and the PSE system. "Adult students have a choice of completing the regular BC Certificate of Graduation, or the BC Adult Graduation Diploma, which has the same foundational course requirements but requires fewer electives" (Ministry of Advanced Education, Skills and Training, 2018, p. 6).

BC Certificate of Graduation (Dogwood)

Students wishing to graduate with the BC Certificate of Graduation under the new MoE curriculum must complete all of the following courses before the age of 19:

- A Language Arts 10 (4 credits)
- A Language Arts 11 (4 credits)
- A Language Arts 12 (4 credits)
- A Social Studies 10 (4 credits)
- A Social Studies 11 or 12 (4 credits)
- A Mathematics 10 (4 credits)
- A Mathematics 11 or 12 (4 credits)
- A Science 10 (4 credits)
- A Science 11 or 12 (4 credits)
- Physical and Health Education 10 (4 credits)
- An Arts Education and/or an Applied Design, Skills, and Technologies 10, 11, or 12 (4 credits)
- Career Life Education (4 credits)
- Career Life Connections (4 credits)

Students must also complete 28 credits of elective courses, and write the provincial Graduation Numeracy Assessment and the Graduation Literary Assessment (Government of British Columbia, 2018e).

The detailed graduation requirements are listed in the BC Graduation Program Policy Guide (British Columbia Ministry of Education, 2018b).

BC Adult Graduation Diploma (Adult Dogwood)

An adult learner (18 years and older) wishing to receive their graduation diploma must complete the following courses:

- A Provincial Level (Grade 12) English or higher* OR a Language Arts 12 (4 Credits)
- An Advanced Level (grade 11) Mathematics or higher* OR a Mathematics 11 or 12 (4 credits)

- Three additional courses at the Provincial Level or higher* OR Advanced Social Science and two provincial Level courses or higher* OR three grade 12 Ministry-authorized courses (4 credits each) OR Social Studies 11 (4 credits) and two Grade 12 Ministry – authorized courses (4 credits each)

*Students can use course credits including post-secondary credits, but the courses must add up to between 100 and 120 hours (Ministry of Advanced Education, Skills and Training, 2018, p. 18-20).

Course Equivalency and External Credentials

There are two avenues through which ABE courses can be used for credit by K-12 students: courses authorized as equivalent (80% match of learning outcomes) and courses authorized for credit. Course equivalency and external credits are used for granting both the BC Certificate of Graduation and the BC Adult Graduation Diploma and/or in helping to determine what courses a student needs to reach their goals, such as admission to a post-secondary institution.

Equivalency

"Courses (or programs) taken outside of the BC school system may qualify for equivalency credit if:

- They match approximately 80% or more of the prescribed learning outcomes of an approved BC course.
- The student provides documentation that the learning outcomes of the course were successfully completed.

In general, students should be granted credit, through equivalency, for courses taken in other Canadian provinces and territories" (Government of British Columbia, 2018a).

ABE courses that are considered equivalent to K-12 courses can be found on page 22 in the *Articulation Handbook*.

External Credits

> Students [in the K-12 system] can earn external credentials by taking courses, programs or activities that fall outside the normal BC [MoE] curriculum…Because these courses are developed and offered outside the BC [MoE] system, they must meet specific criteria in order to be authorized as an external credential course – this includes the same (or greater) level of depth, breadth, and rigour as would be found in Ministry-developed Grade 10, 11 or 12 courses, as well as an evaluation component that assesses the intended learning outcomes. Organizations offering these kinds of courses must also
>
> - be governed by a provincial, national or international body

- have certified instructors
- be non-discriminatory and offer credentials that are available to a significant number of students throughout BC (Government of British Columbia, 2018b)

Therefore, a MoE-approved external course is a MoE-authorized course. These courses are equivalent to or of a higher standard than other MoE-authorized senior secondary (high school) courses, but the learning outcomes differ. The ABE courses that are authorized as external credits are found on page 23 of the ABE *Articulation Handbook*.

MoE and ABE Curriculum Comparison Project

Purpose

A coordinated approach is needed to ensure that the differences between the MoE system and ABE pathways do not become vast, especially with the forthcoming changes in MoE curriculum. ABE disciplines potentially affected include biology, chemistry, computer studies, education and career planning (EDCP), English, Indigenous ABE, mathematics, physics, and social studies.

A careful assessment of ABE learning outcomes and a consistent approach to course and outcome development will ensure that ABE courses stay current in their scope, breadth, presentation and evaluation of learning outcomes. Both the content and the presentation of courses must be examined for currency. This discussion will examine the new learning outcomes, and then provide recommendations to the ABE Steering Committee on:

- how to approach mapping ABE learning outcomes to ensure the maintenance of transferability with the new, more flexible K-12 curriculum;
- how to ensure consistency in approach across the eight working groups when assessing course comparability;
- how to determine priority groups (subject areas) and levels; and,
- appropriate timelines.

The result will be a set of recommendations for a coordinated, systematic response process for ABE that can be implemented in response to the MoE K-12 curriculum changes.

Committee

Project Researcher
Kyle Beres, Selkirk College

Project Steering Committee Lead and Contractor
Allison Alder, Steering Committee Co-Chair, Selkirk College

Project Steering Committee Members
Dan Chetner, Institutional Representative, Okanagan College
Colin Gilker, Steering Committee Co-Chair, Capilano University
Chantale Hutchinson, Social Science Working Committee Chair, Okanagan College
Melinda Worfolk, Adult Literacy Fundamental Working Committee Co-Chair, College of New Caledonia

This project was funded by a grant from the Transfer Innovations program of the BC Council on Admissions and Transfer (BCCAT).

Part 2: Process

Investigation of MoE K-12 Curriculum changes

The documents that were consulted to gather general information on the MoE curriculum changes included the following documents authored by the MoE: *Curriculum Orientation Guide* (n.d.), the *Introduction to British Columbia's Redesigned Curriculum* (2015), the Curriculum Overview, the New Curriculum Info, all information on the Core Competencies, the *Curriculum Redesign Update* (2014), the *BC Graduation Program Implementation Guide* (2018), the *BC Graduation Program Policy Guide* (2018), *Reporting Student Progress (Grades K-9): Guidelines for School Districts* (n.d.), *A Framework for Classroom Assessment* (n.d.), and *Exploring Curriculum Design: Transforming Curriculum and Assessment* (2013), as well as *A Very Adult Curriculum? How the New BC Education Plan Reflects the Andragogical Commitments of Adult Education* authored by St. Clair (2018). All of these documents collectively described the philosophies, goals, and commitments of the new MoE K-12 curriculum. These documents also provided understanding of the timeline of implementation and limited insight into the process of creation. Additionally, the 2017 *Math and Science*, *Career Education*, and *English and Social Studies* Curriculum Comparison Guides, as well as the 2018 *Curriculum Comparison Guide*, lent insight into the development of ABE's current iteration of articulated outcomes.

After the review of the curriculum-related documents, the MoE English and mathematics curricula from kindergarten to grade 12 were reviewed to determine how the curriculum builds from grade to grade. This groundwork was essential to understanding the curriculum in all subject areas, as the MoE curriculum is relatively consistent across subjects.

Investigation of Similarity between MoE and ABE Courses

The curriculum of the English Studies 12 course and the English: Provincial Level – Literature-Based course were reviewed side by side to determine the best approach for comparison. After this review, a simple chart was developed in an Excel spreadsheet to compare the course outcomes for all courses. The chart automatically created graphs to compare course similarity. The comparison chart for each course includes a column for ABE outcomes and another for MoE outcomes. It also includes three columns indicating whether outcomes are similar, not present in ABE, and only in ABE. The courses compared from each subject area include English: Provincial-level – Literature-based; Mathematics: Advanced-level – Algebra; Biology: Advanced-level; Chemistry: Advanced-level; Computer Studies: Intermediate-level; Social Science: Provincial-level – Law; Advanced-level Physics, EDCP, and General and Applied Science: Intermediate-level.

To compare each course, ABE outcomes were copied into the Excel spreadsheet in column (A). Then the MoE's Big Ideas, Curricular Competencies, and Content descriptions were copied into the Excel spreadsheet in column (B) next to their matching ABE outcomes. This meant that the course outcomes were compared directly to determine their similarity. However, because the ABE and K-12 curricula are not identical, the Elaborations (detailed descriptions of the MoE's outcomes at the bottom of each course curriculum outline) were also used to enhance the comparison. This allowed identification of the comparison that was most similar to the ABE outcome. Outcomes in either ABE or K-12 that had no direct comparison were highlighted in red, as was the corresponding column. If possible, the comparison results of all course outcomes were reviewed by a subject area expert. The feedback from experts was then used to ensure the most accurate comparison.

Next, columns that contained similar outcomes (column (D)), not present in ABE outcomes (column (E)), and only in ABE outcomes (column (F)) were populated with 1s. Finally, the amount of similar outcomes identified in each column was totaled to help determine the percentage of similarity between the two sets of outcomes for each course. Appendix 4 lists the raw outcome-to-outcome comparison for each course. Two graphs were derived from these data. The first graph, titled "total similarity," displayed all three categories (similar outcomes, outcomes not present in ABE, and outcomes only in ABE) and presented the results as percentages. The second graph, titled "curriculum match," displayed the two categories of "similar outcomes" and "not present in ABE" in percentages. Appendix 4 presents the raw data and percentage tables.

Because these courses serve different audiences, MoE and ABE curricula have different structures. The MoE has divided its curriculum into three categories (Big Ideas, Curricular Competencies and Content), each with their own learning outcomes, but the ABE curriculum has one category of learning outcomes. For greater clarity, MoE's learning outcomes were assessed individually and not tied to the respective MoE category. This can be seen in the raw detailed comparison data by the different category labels for each subject in Appendix 4.

Consultation with Course Experts

For English: Provincial-level – Literature-based, Alison Daley, Selkirk College, and Melinda Worfolk, College of New Caledonia, were consulted during the process of comparison.

For Mathematics: Advanced-level – Algebra, Karen Shoniker, Selkirk College, was consulted during the process of comparison.

For Biology: Advanced-level, Dan Chetner, Okanagan College, was consulted during the process of comparison.

For Chemistry: Advanced-level, Christine Carlson, SelkirkCollege, was consulted during the process of comparison.

For Computer Studies: Intermediate-level, Brad McVittie, Selkirk College, was consulted during the process of comparison.

The Social Science: Advanced-level course was not directly compared with the Explorations in Social Studies 11 course, but Chantale Hutchinson, Okanagan College, was consulted about the vast difference between these two courses.

For Social Science: Provincial-level – Law, Chantale Hutchinson, Okanagan College, was consulted during the process of comparison.

No consultation was undertaken for the comparisons of the Advanced-level Physics, EDCP, and General and Applied Science: Intermediate-level courses because experts were unavailable.

Development of Future Actions/Development of Recommendations

After completing the initial comparisons of the two English and Mathematics curriculums, the author attended the science, socials, and fundamentals working group' articulation meetings in October 2018. This provided the opportunity to synthesize the information gathered thus far, to receive feedback from subject-area experts on the comparisons, and to determine a path forward, based on feedback from instructors who use the ABE outcomes on a regular basis. The main concerns of the ABE practitioners were:

1. These courses are relatively similar. Do we need to change?
2. What's the rush? Can we wait to see how successful the new graduating students are?
3. How are the PSE institutions responding to the new curriculum?
4. How are small, rural schools implementing this new curriculum?

These questions guided the rest of the comparison process and informed decisions on which conversations were to be prioritized. The author also had conversations with Naomi Ross, Acting Director of Innovative Learning Services in School District 8; Dan Rude, the principal of J.V. Humphries Elementary and Secondary School in Kaslo, BC; Pat Duncan, MoE Superintendent of Learning; Danica Weager, District Indigenization Coordinator for School District 8 (Kootenay Lake); and Gail Higginbottom, Principal: Aboriginal Education, Trafalgar Middle School in Nelson, BC. These conversations provided information on the actions being taken by districts and schools working to implement the new MoE curriculum, and how they are navigating the changes. These conversations also propelled conversations between the author, the project steering committee, and other ABE instructors regarding recommendations for this report.

The author attended the mathematics, English, computer studies, and Indigenous working groups' articulation meetings in March 2019. ABE instructors at these meetings discussed the direct comparisons, as well as the proposed recommendations that were developed after the October 2018 meetings. The working groups provided information on how much time might be available to complete the work needed, should the recommendations be accepted. Additionally, the Indigenous working group provided insights on how ABE has been viewing courses through an Indigenous lens, and on the work that needs to be continued to create trust and relationships to further indigenize courses. Finally, Neil Martin, Coordinator in the Teaching and Learning Institute at Selkirk College, was consulted to help inform the recommendations on how to best approach overarching outcomes.

Part 3: Summary of MoE Curriculum Changes

The BC MoE has implemented a variety of changes to the K-12 curriculum. A summary of the main changes that affect this report is presented below. For a complete description of the changes, please see the *Curriculum Overview* and/or *Curriculum Redesign* (2015) documents.

Personalized Learning

In order to meet the needs of all students, personalized learning is a format designed to recognize that

> not all students learn successfully at the same rate, in the same learning environment, and in the same ways. It involves the provision of high quality and engaging learning opportunities that meet the diverse needs of all students. Schools may provide flexible timing and pacing through a range of learning environments, with learning supports and services tailored to meet student needs…Students and teachers develop learning plans to build on student's interests, goals, and learning needs. Involving students in reflecting on their work and setting new goals based on their reflections allows them to take more control of their learning. Personalized learning also encompasses place-based learning, where learning experiences are adapted to the local environment or an individual context (British Columbia Ministry of Education, 2018g).

Personalized learning is intended to allow teachers more freedom, in every course and subject, to choose what is being taught based on student interest.

Core Competencies

The core competencies are a key feature of the new curriculum. They are embedded in all learning outcomes and contribute to student growth and learning. "Core competencies are sets of intellectual, personal, and social and emotional proficiencies that all students need to develop in order to engage in deep learning and life-long learning" (British Columbia Ministry of Education, 2018d). The three core competencies are Communication, Thinking, and Personal and Social.

Communication

This competency “encompasses the set of abilities that students use to impart and exchange information, experiences and ideas, to explore the world around them, and to understand and effectively engage in the use of digital media” (British Columbia Ministry of Education, 2018c).

Thinking

This competency “encompasses the knowledge, skills and processes we associate with intellectual development. It is through their competency as thinkers that students take subject-specific concepts and content and transform them into a new understanding. Thinking competence includes specific thinking skills as well as habits of mind, and metacognitive awareness” (British Columbia Ministry of Education, 2018c). The thinking competency includes Creative Thinking and Critical Thinking.

Creative Thinking

Creative thinking “involves the generation of new ideas and concepts that have value to the individual or others, and the development of these ideas and concepts from thought to reality” (British Columbia Ministry of Education, 2018e).

Critical Thinking

Critical thinking “involves making judgments based on reasoning: students consider options; analyze these using specific criteria; and draw conclusions and make judgments. Critical thinking competency encompasses a set of abilities that students use to examine their own thinking, and that of others, about information that they receive through observation, experience, and various forms of communication” (British Columbia Ministry of Education, 2018f).

Personal and Social

The third core competency is Personal and Social. This competency “is the set of abilities that relate to students' identity in the world, both as individuals and as members of their community and society. Personal and social competency encompasses the abilities students need to thrive as individuals, to understand and care about themselves and others, and to find and achieve their purposes in the world” (British Columbia Ministry of Education, 2018c). This competency includes Positive Personal & Cultural Identity, Personal Awareness and Responsibility, and Social Responsibility.

Positive Personal & Cultural Identity

Positive personal and cultural identity "involves the awareness, understanding, and appreciation of all the facets that contribute to a healthy sense of oneself. It includes awareness and understanding of one's family background, heritage(s), language(s), beliefs, and perspectives in a pluralistic society" (British Columbia Ministry of Education, 2018m).

Personal Awareness and Responsibility

Personal awareness and responsibility "includes the skills, strategies, and dispositions that help students to stay healthy and active, set goals, monitor progress, regulate emotions, respect their own rights and the rights of others, manage stress, and persevere in difficult situations. Students who demonstrate personal awareness and responsibility demonstrate self-respect and express a sense of personal well-being" (British Columbia Ministry of Education, 2018l).

Social Responsibility

Social responsibility "involves the ability and disposition to consider the interdependence of people with each other and the natural environment; to contribute positively to one's family, community, society, and the environment; to resolve problems peacefully; to empathize with others and appreciate their perspectives; and to create and maintain healthy relationships" (British Columbia Ministry of Education, 2018n).

Know-Do-Understand Curriculum Model

As illustrated in Figure 1 below, "all areas of learning are based on a 'Know-Do-Understand' model to support a concept-based competency-driven approach to learning. Three elements, the Content (Know), Curricular Competencies (Do), and Big Ideas (Understand) all work together to support deeper learning" (British Columbia Ministry of Education, 2018g).

Content (Know)

"The Content outcomes…detail the essential topics and knowledge at each grade level" (British Columbia Ministry of Education, 2018g).

Curricular Competencies (Do)

"The Curricular Competencies are the skills, strategies, and processes that students develop over time…While Curricular Competencies are more subject-specific, they are connected to the Core Competencies" (British Columbia Ministry of Education, 2018g).

Big Ideas (Understand)

"The Big Ideas consist of generalizations and principles and the key concepts important in an area of learning…The big ideas represent what students will understand at the completion of the curriculum for their grade. They are intended to endure beyond a single grade and contribute to future understanding" (British Columbia Ministry of Education, 2018g).

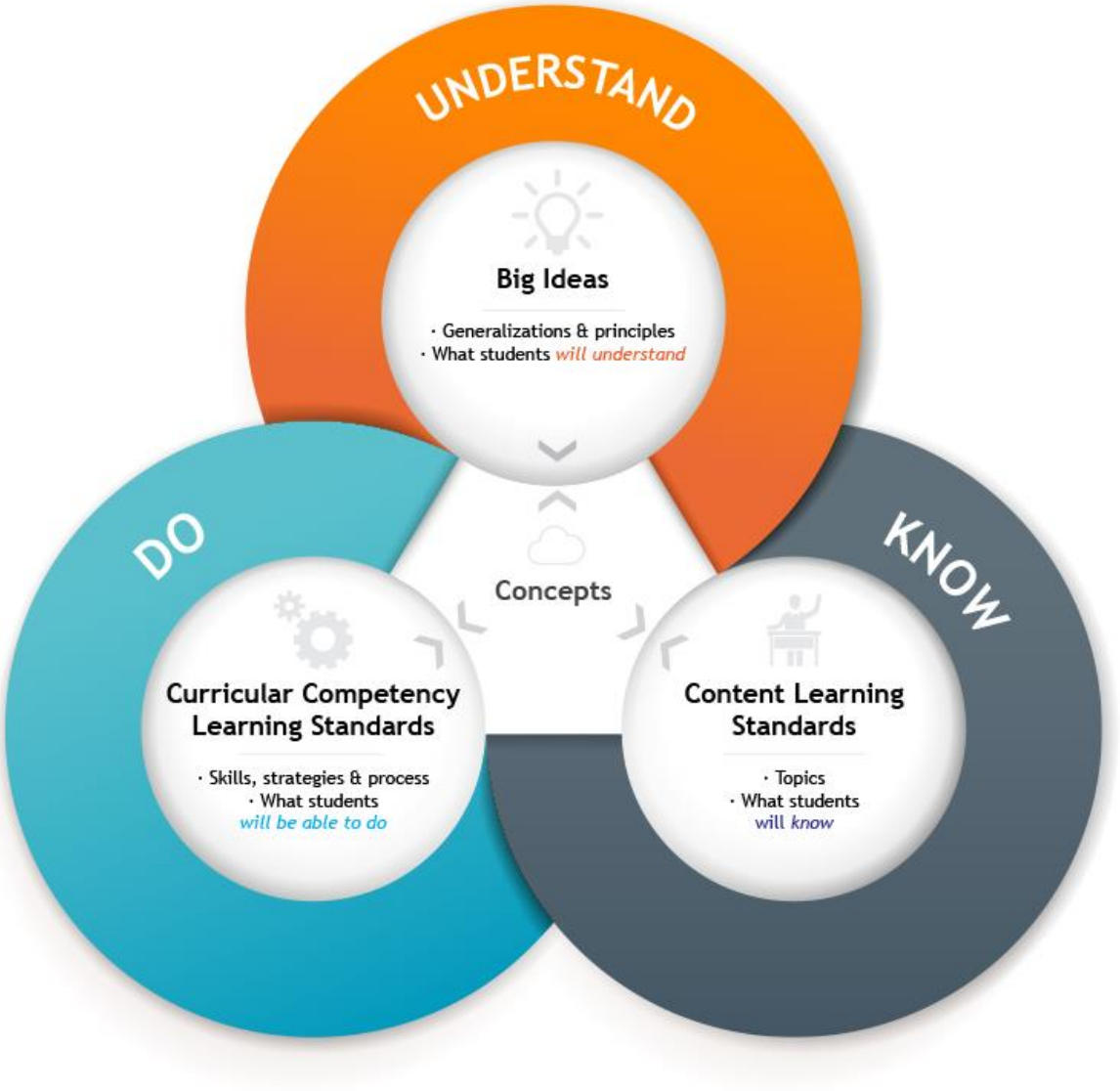


Figure 1. Visual representation of the Know-Do-Understand Model (British Columbia Ministry of Education, 2018g).

Elaborations

"Any of the elements [within Big Ideas, Curricular Competencies, and Content] may include elaborations. Elaborations are provided where necessary to clarify some words or statements and may include examples, key questions, definitions or be used to describe breadth and depth

for content. Elaborations are presented [at the bottom of PDF and Word documents and] as 'mouse-over' links on the website. (British Columbia Ministry of Education, 2018g).

Indigenization

The new MoE curriculum

> builds on what has been learned and extends Aboriginal perspectives into the entire learning journey, rather than into specific courses or grade levels. This means that from Kindergarten to graduation, students will experience Aboriginal perspectives and knowledge as part of what they are learning. And because Aboriginal perspectives and knowledge are embedded in the curriculum, they will naturally influence the ways in which students will be assessed… References to Aboriginal perspectives and knowledge are both explicit and implicit in the redesigned curriculum and are evident in the rationale statements, goals, outcomes, and some of the elaborations(British Columbia Ministry of Education, 2018g).

The new curriculum has a greater emphasis on Indigenous ways of knowing, reflected in the *First Peoples Principles of Learning* These learning principles will

- support students in re-examining Canada's history with a view to better understanding First Peoples' role and place in its evolution,
- help young people challenge stereotypical portrayals of First Peoples, and
- contribute to reconciliation by helping students gain an understanding of the contributions of First Peoples to Canadian society. (British Columbia Ministry of Education, 2018b, p. 6)

Course Changes

The MoE has introduced many new courses in all subject areas, and the MoE curriculum includes many courses that the ABE curriculum does not. Table 1 presents a sample of the new and discontinued courses that may affect ABE curriculum. A detailed list of the course is presented in the 2018 *Curriculum Comparison Guide*.

Table 1

New and Discontinued Courses in Language Arts 12 and Mathematics 11 in the New MoE K-12 Curriculum

Subject/Grade	Previous MoE K-12 Courses	Revised Equivalent MoE K-12 Courses	New or Discontinued courses
English 12	Communications 12		discontinued
	English 12	English Studies 12	
	Writing 12	Composition 12 and Creative Writing 12	
	English Literature 12	Literary Studies 12	
			New Media 12 and Spoken Language 12
Math 11	Foundations of Mathematics 11	Foundations of Mathematics 11	
	Apprenticeship and Workplace Mathematics 11	Workplace Mathematics 11	
	Pre-calculus 11	Pre-calculus 11	
			Computer Science 11 and History of Mathematics 11

Part 4: Curriculum Comparison Results

Overarching Results

As indicated by the raw data in Appendix 4, the ABE curriculum and the new K-12 curriculum look quite different, but many courses have remained quite similar to each other. In most MoE courses, the content has remained relatively the same, and therefore is still quite similar to the equivalent ABE course. However, there are a few key areas of difference. The first is in formatting and the identifiable emphasis in the written curriculum of what is important. The new MoE curriculum has shifted the focus to what the student can do, rather than what they know. While ABE learning outcomes identify what students will be able to do, including the

aspects of content knowledge on which they will focus (for example, in Advanced level algebra, it is expected that a learner will be able to solve and graph linear inequalities in one variable). Next, there is a clear difference in the language being used within the two curricula regarding prescribed learning outcomes and learning standards. Finally, Indigenous knowledge, perspectives, history, and ways of knowing are much more present in the MoE curriculum than they are in the ABE curriculum.

Focus of the Written Curriculum

The new format of the MoE curriculum presents more closely what the MoE deem important. At the top of each course curriculum outline is the big ideas, drawing attention to the important concepts that students are to understand as the courses and grades progress. Next are curricular competencies. These help teachers integrate the core competencies and inquiry-based learning into their classrooms. According to Pat Duncan, MoE Superintendent of Learning, this is the most important aspect of the curriculum (personal communication, October 17, 2018). An example of a curricular competency from English Studies 12 is "Think critically, creatively, and reflectively to analyze ideas within, between, and beyond texts" (British Columbia Ministry of Education, 2018h). Another example, from Pre-calculus 11, is "Solve problems with persistence and a positive disposition" (British Columbia Ministry of Education, 2018j). Finally, there are outcomes on the content that is used to navigate the curricular competencies.

In contrast, the ABE curriculum is written with a focus on the learning outcomes. Each course clearly indicates, in the *Articulation Handbook,* outcomes students should be able to know/do at the end of this course, outlined in more detail than K-12 courses. In the English: Provincial Level – Literature-Based course, one specific outcome example is "recognize tone, including irony and understatement in poetry, short stories and drama" (Ministry of Advanced Education, Skills and Training, 2018, p. 100). A specific outcome example in the Mathematics: Advanced Level – Algebraic course is to "perform operations with real numbers including absolute value and exponential notation" (Ministry of Advanced Education, Skills and Training, 2018, p. 126).

These outcome examples also show the difference in specificity between the MoE curriculum and the ABE curriculum. The MoE curriculum has moved from including very precise prescribed learning outcomes into including broader curricular statements, which provide the teacher more flexibility to deliver material. This student-led learning is a key element in the new MoE curriculum. In comparison, very specific outcome statements remain in the ABE curriculum to guide instructors in what a student is to achieve within each course and level.

Number of and Detail in Outcomes

Another noticeable difference between the new K-12 curriculum and the ABE curriculum is in the number of outcomes. The new K-12 curriculum has reduced the number of outcomes in courses to provide more flexibility for student inquiry and student-guided learning. For example, Pre-calculus 11 has 9 content outcomes, and English Studies 12 has 17 content outcomes. In contrast, in the ABE curriculum, Work Experience has 15 outcomes and, Mathematics: Advanced Level – Algebraic has 63 require outcomes and 44 optional outcomes. Additionally, English: Provincial Level has 35 required learning outcomes and 9 optional outcomes. This number of outcomes may not allow ABE instructors the flexibility to cater to students' interests as the MoE curriculum is now set up to do.

The Elaborations of the MoE curriculum content outcomes make it clear that the course topics are similar to the courses in the ABE curriculum. However, the scope of course detail provided in the ABE curriculum is greater. The level of detail provided in Pre-calculus 11 outcomes is "real number system" and described in the Elaborations as "real number: classification," (British Columbia Ministry of Education, 2018j) and in English Studies 12 detail provided is "reading strategies" and described in the Elaborations as "There are many strategies that readers use when making sense of text. Students consider what strategies they need to use to "unpack" text. They employ strategies with increasing independence depending on the purpose, text, and context. Strategies include but may not be limited to predicting, inferring, questioning, paraphrasing, using context clues, using text features, visualizing, making connections, summarizing, identifying big ideas, synthesizing, and reflecting" (British Columbia Ministry of Education, 2018h). This provides more detail to assist the teacher in creating questions, activities and focuses that best fit the students' needs.

The detail in ABE course outcomes comes in the form of abilities students will acquire upon course completion. For example, in the Mathematics: Advanced Level – Algebraic course, learners are expected to "determine whether a pair of lines is parallel, perpendicular or neither" (Ministry of Advanced Education, Skills and Training, 2018, p. 127) and in the English: Provincial Level – Literature-Based course, students "gather, evaluate, synthesize, and organize information into a research paper of approximately 1500 words using an appropriate documentation style (eg. MLA, APA, or Chicago)" (Ministry of Advanced Education, Skills and Training, 2018, p. 101). Like the MoE Elaborations, such outcomes provide guidance for instructors in creating assignments and activities toward achieving specific learning outcomes.

Consistency

There is a clear effort in the MoE K-12 curriculum to standardize the types of information in each course. Each course outline includes all the important concepts, and the goals of the curriculum. This consistency makes it easy to determine what is important for students to achieve. The subject areas in the ABE *Articulation Handbook* are not expressed in consistent formats. In ABE, each subject area has a unique organizational system, although there is some commonality. For example:

1. Some subject areas, including Mathematics, EDCP, and Biology, have general course-specific goals but not subject-area goals. Other subject areas, like Social Sciences, Chemistry and English, include general subject-area goals, but not course-specific goals.
2. The Indigenous articulation working committee provides learning outcomes primarily applicable to First Nations Studies courses, which when applied across ABE programming foster respect for First Nations people and success of First Nations learners.
3. Most courses include outcomes for each level; however, the outlines for some EDCP courses offer one set of outcomes for all levels and state that the instructor is to determine content depth and breadth.

While these discrepancies may not be a challenge for ABE instructors who use the *Articulation Handbook* regularly, someone who is not familiar with ABE courses may not be able to navigate seamlessly from course to course and subject to subject.

Indigenization

Indigenization is a focal point in the new MoE curriculum.

> The redesigned [MoE] curriculum builds on what has been learned and extends Aboriginal perspectives into the entire learning journey, rather than into specific courses or grade levels. This means that from Kindergarten to graduation, students will experience Aboriginal perspectives and knowledge as part of what they are learning. And because Aboriginal perspectives and knowledge are embedded in the curriculum, they will naturally influence the ways in which students will be assessed...References to Aboriginal perspectives and knowledge are both explicit and implicit in the redesigned curriculum and are evident in the rationale statements, goals, learning standards, and some of the elaborations…In all of the areas of learning,

> teachers are encouraged to teach in ways that respect the place in which the students are — to teach from within the school and its surrounding community (British Columbia Ministry of Education, 2018g).

Indigenous learners and Indigenous ways of knowing and content have long been a part of the ABE learning experience. The Indigenous ABE Working Group was formed in 2001 to support formalization of the inclusion of Indigenous content and provide an Indigenous lens in ABE. The working group reviews and encourages Indigenous content and focus in courses which include Indigenous content and practices and also in exclusively Indigenous courses, such as First Nations Studies. In 2002, presentations were made by the Indigenous working group to select working groups, the ABE Steering Committee, and Deans and Directors of Developmental Education. These groups supported the establishment of the working group, and the working group was ratified by BCCAT's Transfer and Admissions Committee in 2004. This working group has facilitated many important conversations about the importance of including Indigenous knowledge and perspectives within the classroom (Ministry of Advanced Education, Skills and Training, 2018, p. 107). Additionally, BC post-secondary institutions have their own policies and plans that guide ABE departments in the area of indigenization within their institution. These policies and plans vary across institutions.

Instructors including Indigenous knowledge and perspectives in their courses and seeking to have the courses recognized provincially as indigenized have brought their courses to the Indigenous ABE working group for approval. Additionally, courses designed exclusively as Indigenous courses have also been articulated by the Indigenous ABE working group. However, indigenization is neither explicit nor consistent within the curriculum of ABE courses included in the *Articulation Handbook*. There are certain courses that include Indigenous perspectives and knowledge as optional outcomes, such as the Biology: Advanced Level course, and there is an Indigenous subject area that includes examples of outcomes at each level.

Assessment

A detailed comparison of the assessment options was not completed; it was determined to be out of the scope of this project. However, because it is a contributing factor to student success, a small overview was conducted.

MoE *Assessment*

The MoE has a variety of assessment and reporting tools for students depending on the grade of the student.

> In the fall of 2016, the [MoE] mandated a new concept-based, competency-driven curriculum for Grades K-9… Our new focus on the development of competencies (what students can do) is influencing classroom instruction and assessment practices. Increasingly, formative criterion-referenced assessment is creating the basis for responsive communication between students, parents, and teachers on where students are in their learning…and what students need to do to improve… (British Columbia Ministry of Education, n.d.-a, p. 1).

In addition to the change in assessment format, the reporting has changed as well. School districts have two options. Both options use the proficiency scale (see Table 2) for K-3. Option A includes using the proficiency scale for grades 4-9 and providing letter grades when parents request them. Option B includes the use of the proficiency scale for grades 4 and 5 with letter grades available upon request, and letter grades required for grades 6-9 (British Columbia Ministry of Education, n.d.-c). More information on assessment in the K-12 classroom is available in the *A Framework for Classroom Assessment* and *Guidelines for Reporting* documents.

In addition to in-class assessments, there are two Foundations Skills Assessments, in grade 4 and 7 and two types of Provincial Graduation Assessments: the Graduation Numeracy Assessment in Grade 10 and the Graduation Literacy Assessments in grade 10 and 12. The Foundations Skills Assessment "provides parents, teachers, schools, school districts and the [MoE] with important information on how well students are progressing in the foundation skills of Reading, Writing, and Numeracy" (Government of British Columbia, 2018c). The Graduation Numeracy and Literacy Assessments "measure the extent to which students are literate and numerate and provide students with information about their proficiency relative to the provincial curriculum. The Provincial Graduation Assessments also provide information to ensure public accountability, monitor student progress, and ensure that students meet curriculum requirements" (British Columbia Ministry of Education, 2018a, p. 9). The results of all assessments are reported using the Proficiency Scale (see Table 2).

Table 2

Proficiency Scale for Foundation Skills Assessment and Provincial Graduation Assessments

Provincial Graduation Assessments			
Emerging The student demonstrates an initial understanding of the concepts and competencies relevant to the expected learning.	**Developing** The student demonstrates a partial understanding of the concepts and competencies relevant to the expected learning.	**Proficient** The student demonstrates a complete understanding of the concepts and competencies relevant to the expected learning.	**Extending** The student demonstrates a sophisticated understanding of the concepts and competencies relevant to the expected learning.

Source: British Columbia Ministry of Education, 2018a, p. 10

ABE Assessment

ABE does not prescribe methods of assessment. Assessment methods are not included in the *Articulation Handbook* or within course outcomes. Institutions and instructors are expected to determine the most applicable form of assessments for their students. However, each institution's Education Council or Senate approves course outlines, which typically include assessment methods.

Overall Comparison of Curriculum Content

The overall comparison of the curricula was based on the analysis of 935 outcomes. The results of this assessment suggest that overall there is a 48% degree of similarity between the outcomes of ABE courses and the outcomes of the new MoE K-12 courses, with 31% of MoE outcomes found only in ABE and 21% of outcomes not present in ABE (Figure 2). These proportions are skewed by the fact that learners in ABE tend to take a discreet selection of courses, rather than a comprehensive program as they would in the K-12 system. Additionally, there is traditionally room for academic freedom when teachers are delivering course material, which may lead to less obvious outcomes or outcomes not being included. This may be one reason for a lower percent match of the curriculum. Nonetheless, the curriculum was assessed and compared in its entirety and determined.

The curriculum match of nine ABE courses and nine MoE courses shows 69% similarity and 31% not present in ABE (Figure 3). However, because only nine courses were analyzed, this degree of overall similarity across all courses may not be identical. Some of the nine courses compared are much more closely aligned than others. A more detailed comparison of the content of each course can be found in the next section.

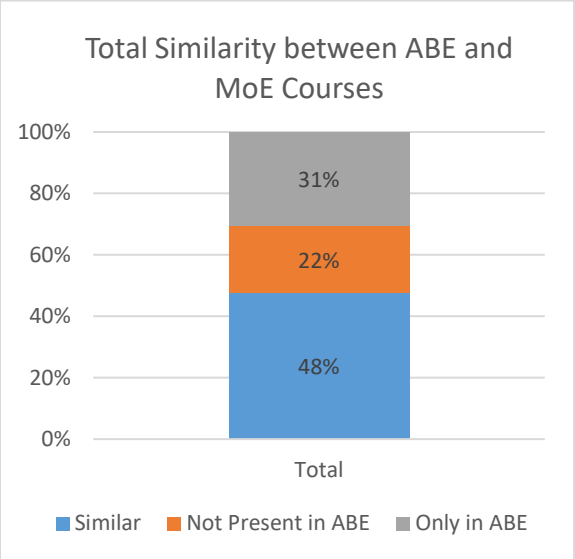


Figure 2. Outcomes comparison of nine ABE courses and nine MoE courses

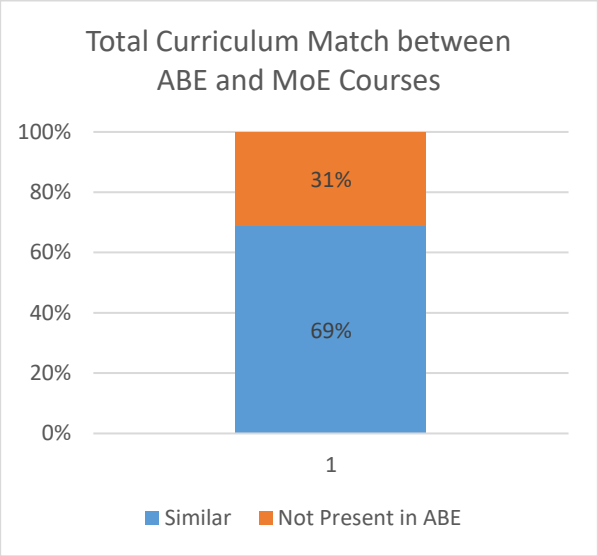


Figure 3. Curriculum match of nine ABE courses and nine MoE courses

Course-Specific Comparison

The author's discussions with content experts revealed that the interpretation of both the ABE and MoE curricula varies among individuals. This variation reveals how flexible the MoE curriculum is and how specific the ABE curriculum is. The MoE curriculum includes limited information and few specifics on each topic, which contrasts with the more specific outcomes in the ABE curriculum. Additionally, the MoE curriculum includes much of its new pedagogy within the curriculum, whereas the ABE curriculum does not prescribe how to deliver the learning outcomes. To explore these differences in more depth, we examined in detail the content of ABE's English: Provincial Level – Literature-Based against the MoE's English Language Arts – English Studies 12; and ABE's Mathematics: Advanced Level – Algebraic against the MoE's Pre-calculus 11, while less detail was examined in the rest of the nine courses compared due to time restrictions.

English: Provincial Level – Literature-based

The two English courses that were compared are ABE's English: Provincial Level – Literature-Based and the MoE's English Language Arts – English Studies 12. English Studies 12 was chosen instead of Literary Studies 12 because English Studies 12 is a graduation requirement, whereas Literary Studies 12 is an elective (British Columbia Ministry of Education, 2018b, p. 18). Both courses fulfill the requirement for grade 12 graduation. They are also a prerequisite for many post-secondary programs.

These two courses are 51% similar, with 29% only in ABE and 20% not present in ABE (Figure 4). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, of ABE English: Provincial Level to the MoE's English Language Arts – English Studies 12 showed 63% similarity and 37% not present in ABE (see Figure 5).

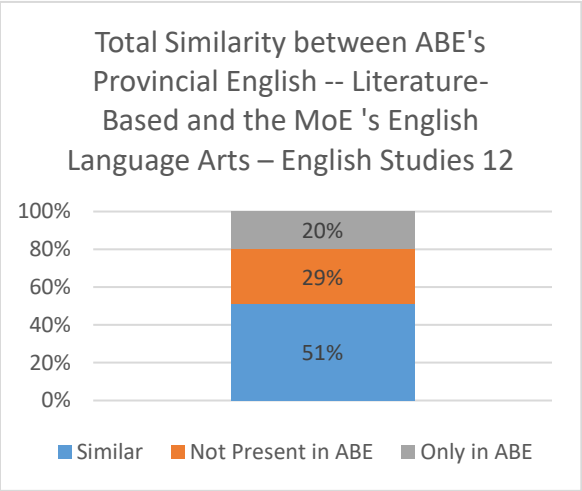


Figure 4. Curriculum comparison of ABE's English: Provincial Level – Literature-based and the MoE's English Language Arts – English Studies 12

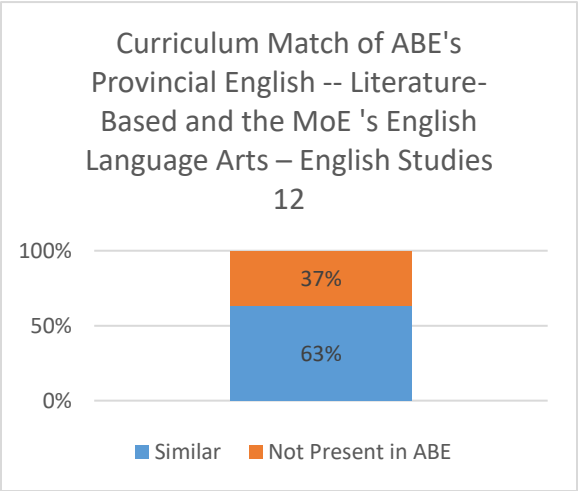


Figure 5. Curriculum match of ABE's English: Provincial Level – Literature-based to the MoE's English Language Arts – English Studies 12

Most of the similarities fall within the content section. These two courses delve into much of the same content in terms of literary analysis. Each course includes critical and creative thinking; a variety of literature, oral language strategies; reading and research methods; and writing skills. There is more specificity within the ABE course content than in the MoE course content, and the MoE content has much more flexibility for students to guide their own classroom learning. For example, the ABE content includes, "gather, evaluate, synthesize, and organize information into a research paper of approximately 1500 words using an appropriate documentation style (e.g. MLA, APA, or Chicago)" (Ministry of Advanced Education, Skills and Training, 2018, p. 101), whereas the MoE content includes, "transform ideas and information to create original texts, using various genres, forms, structures, and styles" (Ministry of Education, 2018h). This shows different expectations of teachers and of students. The content that is only in ABE includes specific examples of abilities the students should have, as well as optional outcomes. For example, two abilities within the ABE content that are not present in the MoE content are to "produce writing on demand (e.g. essays, exams)" and to "give and respond effectively to feedback during oral presentations." However, the information that is not present in the ABE content is course-specific goals and Indigenous knowledge and perspectives. Appendix 4.2 provides the detailed outcome-to-outcome comparison.

Mathematics: Advanced Level – Algebraic

The two Mathematics courses compared are ABE's Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11. A comparison of all outcomes in each course, including the optional outcomes in ABE's course and the content elaborations in MoE's course, determined that these courses are 45% similar, with 21% of outcomes not present in ABE and 34% being only in ABE (Figure 6). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, of ABE Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11 showed 68% similarity and 32% not present in ABE (Figure 7).

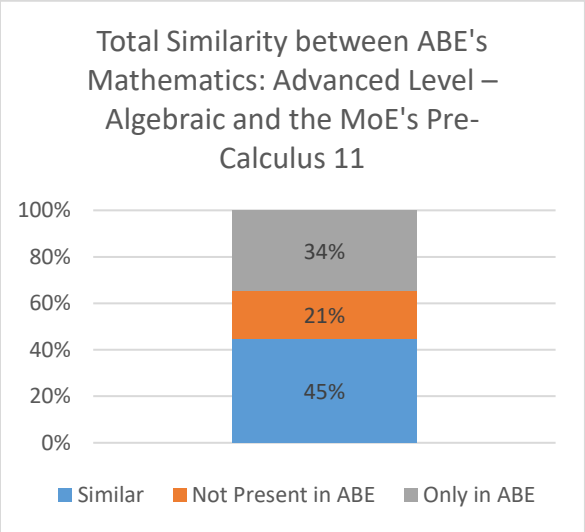


Figure 6. Curriculum comparison of ABE's Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

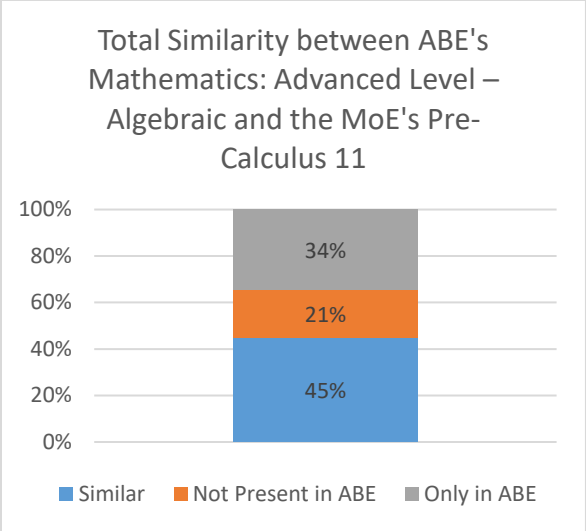


Figure 7. Curriculum match of ABE's Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

The similarity may be small because the ABE Mathematics: Advanced Level – Algebraic curriculum does not include goals or competencies in the written curriculum that are similar to the MoE course. ABE Mathematics: Advanced Level – Algebraic has two goals, which are not similar to the four MoE big ideas and does not include any abilities like the curricular competencies in the written curriculum. The MoE curricular competencies include areas of thinking strategies, problem solving and Indigenous knowledge and perspectives. While these may be implied in ABE curricula, the result remains that when comparing outcome to outcome, the written curricula have a relatively small percentage of similarity.

However, these two courses are quite similar in content outcomes. Including the vast number of optional outcomes in the ABE course, which do not exist in the MoE course, the content is 54% similar with 40% only in ABE and 6% not present in ABE (Figure 8). When the comparison removes the content that is only in the ABE course, which includes many of the optional outcomes, the content of the courses becomes 89% similar with 11% not present in ABE (Figure 9). The content in the MoE course that is not in the ABE course is focused on financial literacy. Appendix 4.3 provides the detailed outcome-to-outcome comparison.

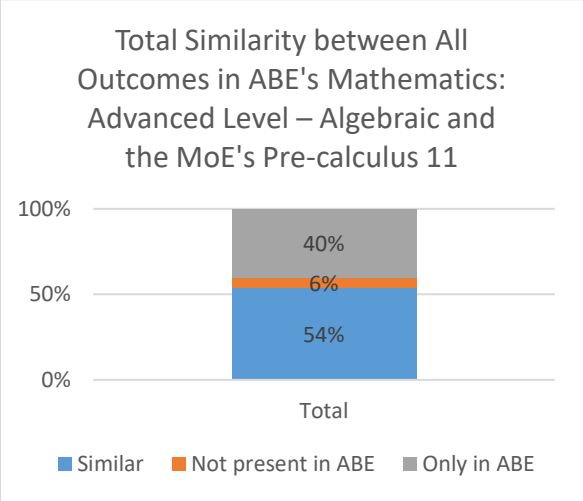


Figure 8. Content match of ABE's Mathematics: Advanced Level – Algebraic (all outcomes) and the MoE's Pre-calculus 11

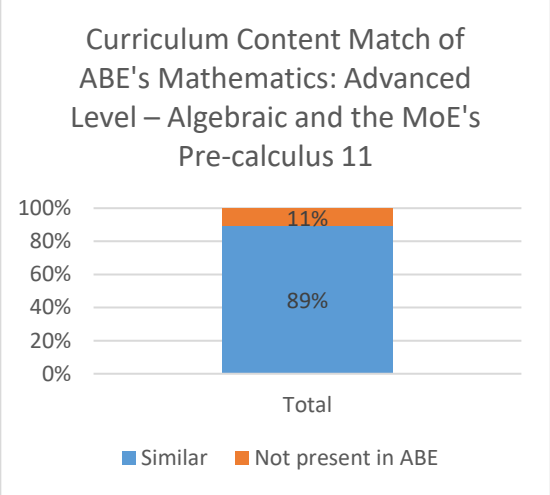


Figure 9. Curriculum content match of ABE's Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

Social Science

Some MoE and ABE Social Science courses are very similar, and some are very different. ABE's Social Studies: Provincial Level – Law and the MoE's Law Studies 12 are very similar courses with only 7% of outcomes not present in the ABE course. As with the other courses compared, the ABE course content was more specific, with 34% of outcomes only in ABE, making the courses 59% similar (Figure 10). The comparison of the curriculum match, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, of ABE's Social Studies: Provincial Level - Law to MoE's Law Studies 12 showed 95% similarity of outcomes with 5% not present in ABE (Figure 11). Appendix 4.4 provides the outcome-to-outcome detailed comparison.

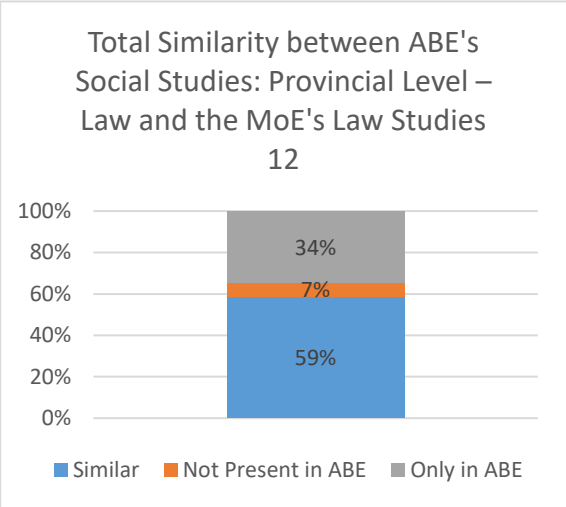


Figure 10. Curriculum comparison of ABE's Social Studies: Provincial Level -- Law and the MoE's Law Studies 12

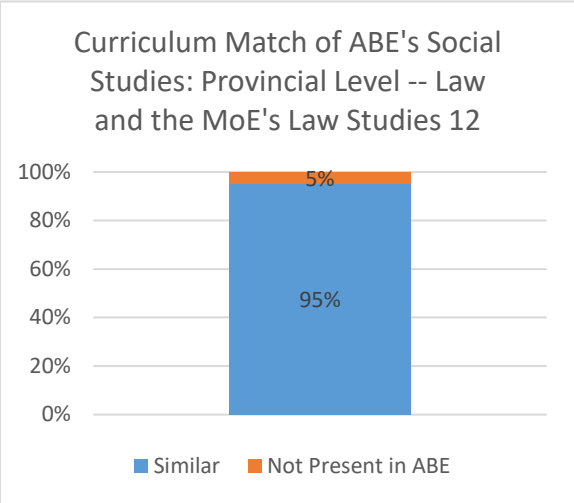


Figure 11. Curriculum match of ABE's Social Studies: Provincial Level -- Law and the MoE's Law Studies 12

However, this amount of curriculum match is not the case for all Social Science courses. For example, the ABE Social Science: Advanced Level course was not directly compared with the MoE Explorations in Social Studies 11 course, vast differences exist between these two courses. Explorations in Social Studies 11 "is designed to provide flexibility for teachers and students while ensuring that the rigorous provincial curriculum standards are met. Based on your students' interests, your strengths, and your department's course offerings, you may combine Big Ideas and Content, and add Elaborations to the Curricular Competencies to construct the curriculum for your course" (British Columbia Ministry of Education, 2018i). This means that there are no specified outcomes, so it is very different from Social Science: Advanced Level, which has specific outcomes.

General and Applied Science: Intermediate Level

ABE's General and Applied Science: Intermediate Level course and the MoE's Science 10 course appear to be quite different. The outcomes are 13% similar, with 52% only in ABE and 34% not present in ABE (Figure 12). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, indicates only 28% similarity and 72% not present in ABE (Figure 13).

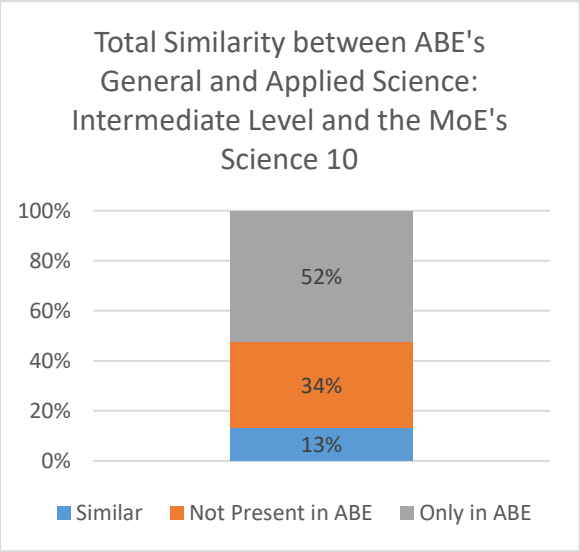


Figure 12. Curriculum comparison of ABE's General and Applied Science: Intermediate Level and the MoE's Science 10

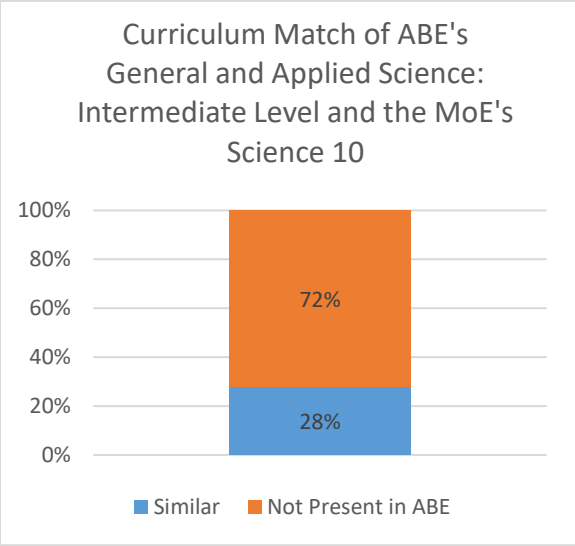


Figure 13. Curriculum match of ABE's General and Applied Science: Intermediate Level and the MoE's Science 10

Both courses are focused on lab work and introducing students to a variety of topics in science. However, these topics seem to be addressed in different ways. For example, General and Applied Science: Intermediate Level clearly includes an introductory unit and a unit in each area of science (biology, physics, and chemistry) plus one unit of choice. Science 10 in the MoE curriculum includes many topics from which the teacher may choose, but these topics seem to be different from those in ABE Science 10. The course outline for this course states that the topic of this unit may be chosen from topics already explored, or may be another topic of student or instructor interest. This means that the courses may, in practice, be much more similar than they appear on paper. Appendix 4.5 provides the detailed outcome-to-outcome comparison.

Biology: Advanced Level

ABE's Biology: Advanced Level and the MoE's Life Sciences 11 are quite similar. There is only 2% of the content of the MoE course not present in the ABE course. However, 49% of the outcomes are similar and 49% are only in the ABE course (Figure 14). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, showed 95% similarity with 5% not present in the ABE course (Figure 15).

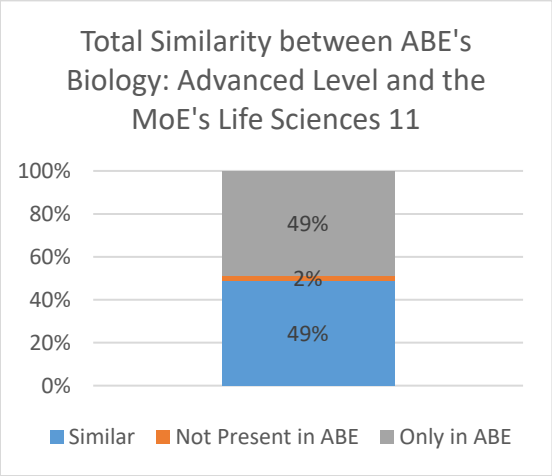


Figure 14. Curriculum comparison of ABE's Biology: Advanced Level and the MoE's Life Sciences 11

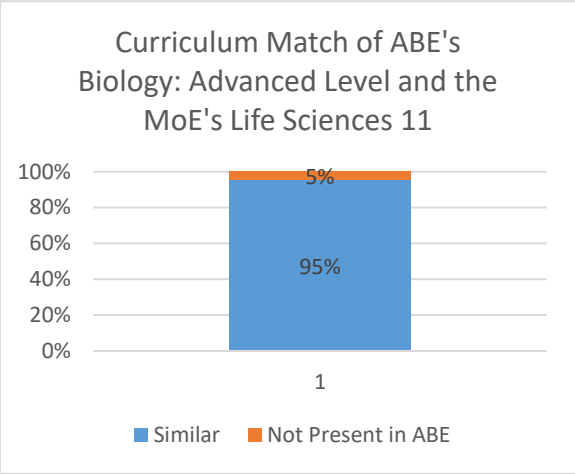


Figure 15. Curriculum match of ABE's Biology: Advanced Level and the MoE's Life Sciences 11

This finding again shows the differences between specificity of the ABE outcomes and the newly integrated flexibility in the MoE curriculum. The ABE course has clear goals, which align with the MoE curricular competencies as well as content. However, the ABE course does not have course-specific goals, but two outcomes, that align with the MoE's course's big ideas. Therefore, both courses include similar expectations. Appendix 4.6 provides the detailed outcome-to-outcome comparison.

Chemistry: Advanced Level

ABE's Chemistry: Advanced Level and the MoE's Chemistry 11 have outcomes that are 52% similar, with 33% only in ABE. Only 15% of the MoE course outcomes are not present in the ABE course (Figure 16). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, showed 77% similarity between the courses' outcomes, with 23% not present in the ABE course (Figure 17).

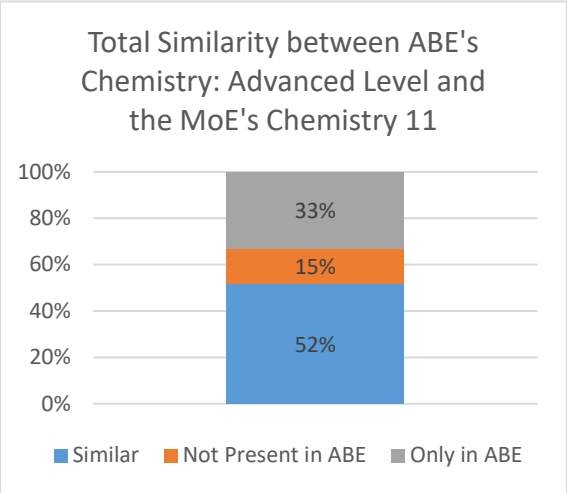


Figure 16. Curriculum comparison of ABE's Chemistry: Advanced Level and the MoE's Chemistry 11

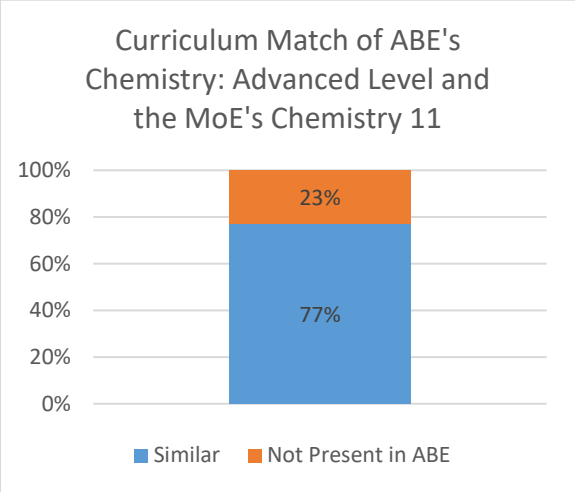


Figure 17. Curriculum match of ABE's Chemistry: Advanced Level and the MoE's Chemistry 11

Like the ABE Biology: Advanced Level course, the ABE Chemistry: Advanced Level course goals are similar to the MoE's curricular competencies, and three of the ABE course outcomes match the MoE Big Ideas theme. The main differences between the ABE course and the MoE course involve Indigenous knowledge and perspectives. Chemistry 11 incorporates these concepts throughout the course, whereas Chemistry: Advanced Level does not. Appendix 4.7 provides the detailed outcome-to-outcome comparison.

Physics: Advanced Level

ABE's Physics: Advanced Level and the MoE's Physics 11 have 59% of outcomes in common with 22% only in ABE and 19% not present in ABE (Figure 18). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, of the ABE Physics: Advanced Level course to the MoE course Physics 11 showed 75% similarity of outcomes, with 25% not present in ABE (Figure 19). Appendix 4.8 provides the detailed outcome-to-outcome comparison.

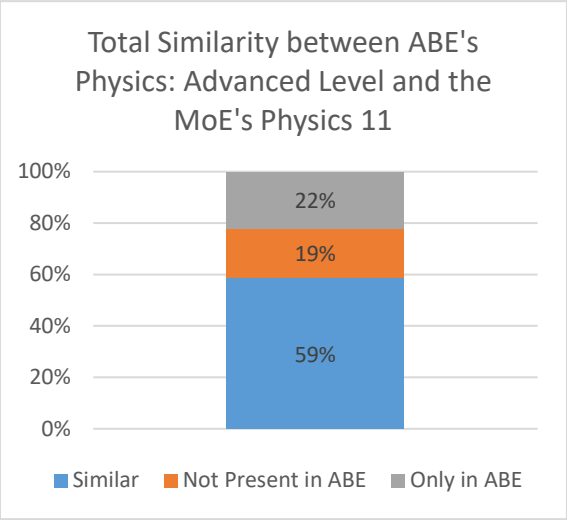


Figure 18. Curriculum comparison of ABE's Physics: Advanced Level and the MoE's Physics 11

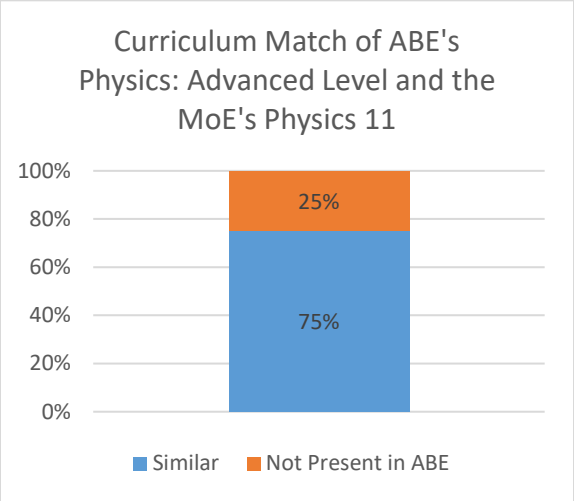


Figure 19. Curriculum match of ABE's Physics: Advanced Level and the MoE's Physics 11

The content of the courses is quite similar. The information in the MoE course that is not present in the ABE course involves Indigenous knowledge and perspectives, as well as the course-specific goals. Additionally, Physics 11 does not have specifications surrounding lab requirements, whereas Physics: Advanced Level does. Physics: Advanced Level also includes more specific outcomes than Physics 11.

Computer Studies: Intermediate Level – Computer Skills

ABE's Computer Studies: Intermediate Level and MoE's Computes Studies 10 were chosen for comparison because in the MoE curriculum, Grades 11 and 12 Computer courses diverge into more specific topics than in the ABE curriculum. Even still, the ABE Computer Studies: Intermediate Level course and the ABE Computer Studies 10 course are vastly different from each other. There is only 3% similarity between the courses, with 34% of outcomes only in the ABE course and 63% of outcomes not present in ABE (see Figure 20). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, showed 5% similarity with 95% of the MoE course outcomes not present in the ABE course outcomes (Figure 21). Appendix 4.9 provides the detailed outcome-to-outcome comparison.

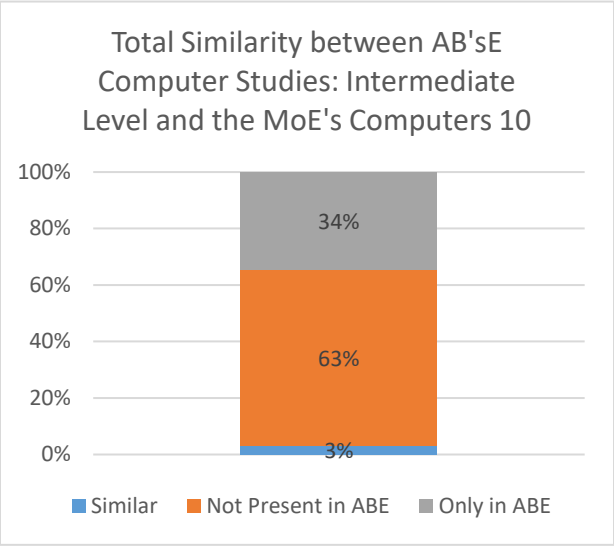


Figure 20. Curriculum comparison of ABE's Computer: Intermediate Level and the MoE's Computer Studies 10

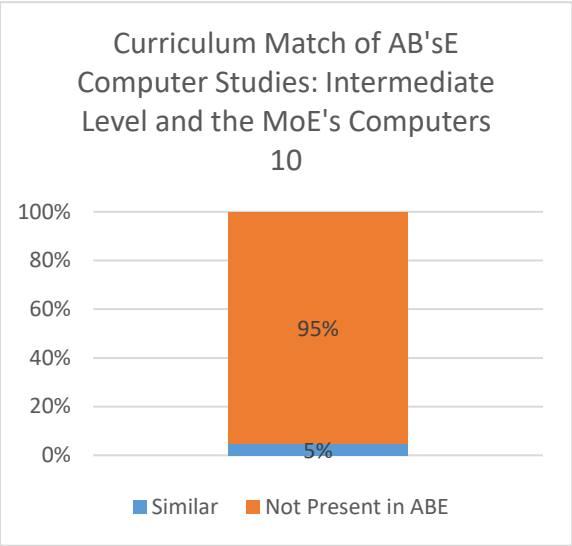


Figure 21. Curriculum match of ABE's Computers: Intermediate Level to the MoE's Computer Studies 10

These differences likely exist because these two courses are geared toward very different audiences. Students taking Computer Studies 10 have likely grown up with technology and likely have a large amount of pre-existing knowledge of how to use computers. This allows the course to move into topics such as specific programs and trouble-shooting. However, the ABE course is geared toward adults who have less experience with technology. Therefore, this course begins with basics such as typing techniques and saving and finding files. Because of the different audiences, these two courses have very different goals.

Education and Career Planning: Career Planning, Portfolio, Student Success, and Work Experience

Courses in Education and Career Planning (EDCP) were challenging to compare, because the four ABE courses - Career Planning, Portfolio, Student Success, and Work Experience - greatly overlap with the two MoE courses - Career Life Education and Career Life Connections. Additionally, some of the outcomes in the four ABE courses are similar to each other, and these courses include many optional outcomes. Because of this overlap, all four ABE courses were compared to the MoE Career-Life Education course. The MoE Career-Life Connections course was not compared to any ABE courses, due to time constraints and to the decision to compare only one course for each relevant subject area.

The ABE Career Planning and Student Success course content is written in a way that can be adapted to different levels, while the other ABE EDCP courses are strictly Provincial Level courses. In both Career Planning and Student Success, "learning outcomes listed are the same for Fundamental, Intermediate, Advanced, and Provincial levels because of the developmental nature of the content. Accordingly, the depth and breadth at which topics are explored and expectations of student work will vary with each level" (Ministry of Advanced Education, Skills and Training, 2018, p. 82). In comparison, the MoE Career-Life Education course can be taken in grade 10, 11 or 12. The outcomes in the course do not change for each grade level. Both courses' curricula take previous learning experience into account and encourage students to reflect on their experiences.

The outcomes of the four ABE EDCP courses are 78% similar to the outcomes of the MoE's Career-Life Education course, with 18% of outcomes only in the ABE courses and a minimal 4% not present in the ABE courses (Figure 22). The comparison of the matched outcomes, which removes the outcomes only present in ABE to review only the outcomes specifically comparable to the MoE outcomes, showed 95% similarity of outcomes with 5% missing in the ABE courses (Figure 23). Appendix 4.10 provides the detailed outcome-to-outcome comparison.

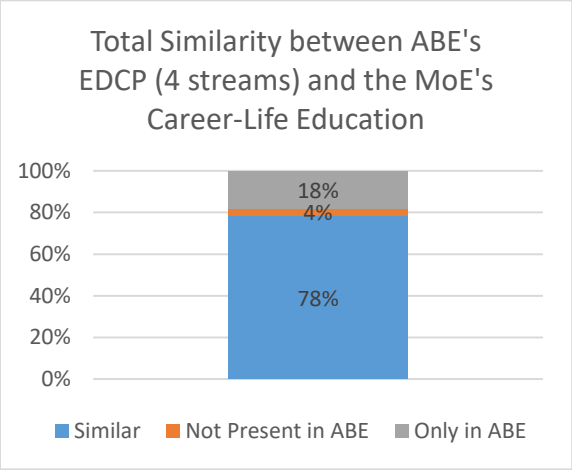


Figure 22. Curriculum comparison of ABE's EDCP (4 courses) and the MoE's course Career-Life Education

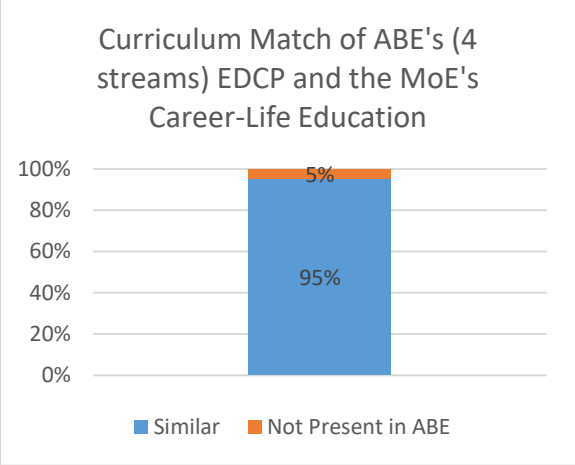


Figure 23. Curriculum match of ABE's EDCP (4 courses) to the MoE's course Career-Life Education

Even though these courses are quite similar, they are geared toward very different audiences. The life experiences of students coming into the classroom make these courses different. For example, in the ABE Student Success course there is much more emphasis on how a student learns than there is in the MoE Career-Life Education course. A possible reason for this is that adult learners taking the Student Success course could be back in school for the first time in many years, and arrive motivated to both learn and to reflect on their learning, whereas high-school students taking the Career-Life Education course have continuously been studying since they were four or five years old.

Part 5: Recommendations to Prepare for Possible Changes to ABE Courses

Maintain Current Minimum Amount of Similarity for Transferability

Because the K-12 system and the ABE system serve different students, there should be some difference in the requirements of each system's courses. Adults enrolled in ABE come to the classroom with very different life experiences and needs, and these needs must be considered. Therefore, it is recommended that the minimum amount of similarity between ABE courses and MoE for transferability remain at 80% of course content. This degree of similarity will ensure that students who complete courses within ABE are equally or more prepared for PSE and the workforce as MoE students. This amount of similarity still provides flexibility for instructors, and it also allows students with experience in the new MoE curriculum to easily enter ABE courses or programs.

Maintain ABE Courses to Meet Post-Secondary Admission Requirements

Since MoE courses are prerequisites for entry to post-secondary programs, admissions requirements for post-secondary institutions may change if MoE courses change. ABE needs to ensure that all ABE courses currently accepted for post-secondary admission remain acceptable. Ideally, an ABE representative from each working group could regularly attend post-secondary articulation meetings in the same subject area in order to ensure that the ABE courses are preparing students appropriately for first-year courses. The ABE representative could gather information on the knowledge and skills students need in order to be successful in post-secondary courses. With this information, the ABE articulation committee can continue to modify course outcomes to best prepare students for further education.

The ABE representatives could ask these questions at post-secondary articulation meetings:

- What is important for students to know when entering your course?
- What discreet skills do students need to have when entering your course?
- What major concepts do students need to understand when entering your course?

Additional Comparison of Courses

Intermediate – Provincial Courses

Because this study compared only one ABE and MoE course from each Intermediate – Provincial subject, the ideal next step is for the rest of the Intermediate – Provincial ABE courses to be compared to their MoE counterparts before major changes to the ABE curricula are decided upon. These comparisons will inform the amount of similarity between the courses and the

possible changes required. Keeping in mind that ABE students, unlike high school students, do not take a pre-determined set of courses, determining the overall amount of similarity between ABE and MoE courses will assist ABE in deciding if changes are necessary.

The ABE working groups could be tasked with the job of comparing the rest of the courses. However, the working groups have expressed concern about the amount of work this comparison process will entail and how little time there is available to complete it. Therefore, it is recommended that the ABE committee seek funding to hire an individual to complete the course comparisons, with input from the working groups. A diagram for the suggested workflow if the working groups do the course comparisons is in Appendix 1.1. The template used for the course comparisons in this report can be found in Appendix 3.1.

Fundamental Courses

Currently, the ABE Fundamental English and Mathematics course outcomes are being revised. Therefore, comparisons were not conducted for these courses. A conversation with Melinda Worfolk regarding the potential changes to Fundamental courses indicated that the changes seem to be in alignment with the changes in the MoE courses. It is most important that Fundamental courses prepare students for Intermediate and beyond courses. If the Intermediate to Provincial courses are altered, it should be determined whether the Fundamental courses will continue to provide appropriate foundational skills to prepare students for these courses. It may not be necessary for Fundamental courses to be directly compared to MoE courses because these ABE courses facilitate learning for students with very different needs than MoE students.

Determining Whether Courses Need to be Changed

Once all or most of the ABE courses have been compared to the MoE courses, the next step is to determine whether the ABE courses need to be changed. This determination could be made by the individual hired to complete the comparison, in consultation with the working groups, or by the working groups themselves. In making this determination, it is important to consider the prerequisite knowledge, the skills required for successful course completion, and the experience and needs that adult learners bring to the classroom.

The decision on whether change is necessary could be based on the answers to these questions:

- Does this course content meet the adult learners' needs?
- Does this course content meet the knowledge requirements for the next level of study (e.g. Provincial ABE courses or post-secondary courses)?

A detailed comparison process and recommended work flow diagram can be found in Appendix 1.

Developing General ABE Outcomes

Currently, there is no set of general outcomes for ABE as a whole. The new MoE curriculum has implemented core competencies which guide the curriculum choices and teaching methodologies. These competencies reflect the important skills students will gain from their K-12 studies in the MoE system. In comparing the ABE and the MoE curricula, it became evident that there were many similarities between the MoE core and curricular competencies and the ABE curricula. Thus, the core competencies in the MoE system are implicitly included in the ABE curriculum. However, these competencies are not explicitly stated in the ABE curriculum, which makes the ABE and MoE curricula look quite different from each other. Including a set of general outcomes at the beginning of the *Articulation Handbook*, encompassing all of the learning that takes place in ABE classrooms, may be the best way to share ABE classroom practices. As an example, here are Selkirk College's ABE Program Outcomes:

> Learners participating in Academic Upgrading courses at Selkirk College will finish their studies being able to demonstrate a number of the program outcomes listed below:
>
> 1. Demonstrate increased self-confidence.
> 2. Manage financial matters by applying principles of numeracy, accounting and integration of relevant technology.
> 3. Use appropriate verbal, non-verbal and written skills to communicate.
> 4. Develop effective learning strategies and adapt them to new situations.
> 5. Create realistic personal, work, and educational goals and plans to achieve them.
> 6. Exhibit positive professional behaviour and employment-related skills that maximize opportunities for success.
> 7. Demonstrate resilience, creativity and critical thinking in challenging situations.
> 8. Participate effectively as part of a team and in society.
> 9. Identify personal values, make decisions, and balance responsibilities to increase well-being.
> 10. Practice appropriate safety procedures.

11. Use current and emerging technology effectively. (Selkirk College, 2018)

The general ABE outcomes need to answer the question: What does every student who completes an ABE course need to do? The outcomes should be written to clearly show that students are developing these skills, as many of the broad skills have no finite completion. Students are ever-evolving and learning. On the other hand, for obvious reasons, subject and course outcomes need to be more specific, and these need to be in alignment with the priorities of ABE (Neil Martin, personal communication, March 19, 2019).

If this recommendation is accepted, ABE general outcomes should be created before subject-specific general outcomes. Subject-specific general outcomes should be created prior to creating general course outcomes. Both subject and course outcomes need to align with the overarching outcomes, and course outcomes need to align with subject outcomes (Neil Martin, personal communication, March 19, 2019). The Steering Committee should ensure that all subject and course outcomes are appropriately specific to each discipline within the priorities of ABE.

Consistent Format and Requirements in the Articulation Handbook

Having the same format and requirements for information on every subject and course will make navigating the ABE *Articulation Handbook* easier for everyone. Providing subject area outcomes, as well as general outcomes for each course that connect to general ABE outcomes, will also create consistency. This structure will ensure that each course includes the same elements, while also stating clearly and concisely what a student is to be able to understand and do at the end of that course.

Because the ABE working groups meet separately, and at different times of the year, two potential templates for course outcomes have been provided in Appendix 3.2. If consistency is deemed important, the Steering Committee may choose one of these templates or create its own, and then require the chosen template to be used by all working groups for all courses. Once all the courses are formatted using the chosen template, one person should be tasked to edit the *Articulation Handbook* each fall. This will help ensure that the information on each subject and course is consistently formatted.

Incorporating Indigenization

As Canada moves forward with decolonization and reconciliation, education must play a major role in recognizing and implementing Indigenous knowledge and perspectives. According to the recently published *Pulling Together Learning Series* (2018),

> "Indigenization is a process of naturalizing Indigenous knowledge systems and making them evident to transform spaces, places, and hearts. In the context of post-secondary education, this involves bringing Indigenous knowledge and approaches together with Western knowledge systems…The goal is not to replace Western knowledge with Indigenous knowledge, and the goal is not to merge the two into one. Rather, Indigenization can be understood as weaving or braiding together two distinct knowledge systems so that learners can come to understand and appreciate both…We must come to know, understand, and value Indigenous culture[, which] means learning about local cultures, languages, and protocols" (p.4-7).

One of the key elements of the new MoE curriculum is the inclusion of Indigenous knowledge and perspectives in every grade, subject and course. In ABE-articulated outcomes, there is not yet a comprehensive mandate for indigenization throughout all subject areas, and this is one of the reasons for the low overall similarity between the courses in the two curricula. Throughout the ABE system, instructors have indigenized content and approach based on their setting, learners, and professional experience. Indigenous ABE articulation provides guidance on indigenization, and many subject areas have collaborated to better understand the complexities of indigenization and appropriate integration of an Indigenous lens at the course level.

The Ministry of Advanced Education firmly supports both the Truth and Reconciliation Commission's Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples (Ministry of Advanced Education, Skills and Training, 2019); as well, many institutions offering ABE in BC have signed on to Colleges and Institutes Canada's Indigenous Education Protocols. ABE's commitment to Indigenous education is hence supported by robust commitment within colleges and universities offering ABE. With 198 First Nations in BC (Government of British Columbia, 2019a) and the demographic evidence of both a growing population and lower high school graduation rates among indigenous persons in BC (British Columbia Teachers Federation, 2019), ABE programs are well positioned to welcome and serve increased numbers of learners, to pedagogically meet them where they are, and to provide foundational education around First Nations history, perspectives, and realities.

Indigenous culture and participation is different at every institution. Articulation representatives and instructors at each institution engage with their college's Indigenous committees, departments and academic governance bodies to facilitate respectful and productive connections with local communities to learn about their specific knowledge and perspectives. These conversations allow ABE representatives to appropriately view courses and processes through an Indigenous lens specific to their institution's local Indigenous population and to adapt or change appropriately. The *Pulling Together Learning Series* (2018) suggests considering these questions in incorporating Indigenous knowledge and practices into courses:

> **Goals:** Does the course goal include holistic development of the learner? If applicable, does the course benefit Indigenous people or communities?
>
> **Learning outcomes:** Do the learning outcomes emphasize cognitive, emotional, physical, and spiritual development? Is there room for personalization, group and individual learning goals, and self-development?
>
> **Learning activities:** Have you included learning activities that are land-based, narrative, intergenerational, relational, experiential, and/or multimodal (rely on auditory, visual, physical, or tactile modes of learning)?
>
> **Assessment:** Is the assessment holistic in nature? Are there opportunities for self-assessment that allow students to reflect on their own development?
>
> **Relationships:** Are there opportunities for learning in community, intergenerational learning, and learning in relationship to the land?
>
> **Format:** Does the course include learning beyond the classroom "walls"? (p. 21)

When a course is brought to articulation, subject-specific working groups, in conjunction with the Indigenous working group, can consider the course and offer perspective on indigenization by sharing perceptions and experiences, keeping in mind that each area will have different perspectives and needs. The Indigenous ABE working group suggests using the *First Peoples Principles of Learning* in addition to the *Articulation Handbook* examples of strategies for integrating Indigenous ways of knowing (*Articulation Handbook* p. 109) to help review courses. It may be helpful for the Indigenous working group to provide additional questions for every

working group that will help guide discussion of the Indigenization process and the review of outcomes. In addition to this, it would be helpful for the Indigenous working group or a recommended external facilitator with knowledge in this field to guide discussions.

Inclusion of Indigenous knowledge and perspectives in courses or programs is complex; guidance and perspective can be found in *Pulling Together: A Guide for Indigenization of Post-Secondary Institutions* (2018). For articulation, the *Curriculum Developers* section of this resource is particularly useful. Appendix 2 of this report lists additional resources to assist instructors working to add Indigenous knowledge and perspectives to their courses. The Indigenous ABE working group and post-secondary institutions may also be able to provide resources to those who are seeking more knowledge.

Updating the Equivalency Table

Because the new MoE curriculum has changed, added, and discontinued courses, it is important for ABE to reexamine the equivalency table on page 22 of the *Articulation Handbook* to determine which courses can remain, which courses need to be removed, and which courses may be added. To ensure the most accurate information, updating of this table should take place once all the ABE courses have been compared and updated (if need be) and the success of the new MoE curriculum is determined.

Conducting A Follow-Up Study

The revised Grade 11 and 12 MoE curriculum will not be mandatory until the fall of 2019. While the MoE has tested the curriculum and has been updating it as feedback comes in, further review and alternations will take place once the full curriculum is implemented. According to Pat Duncan, BC MoE Superintendent of Learning, student success within the classroom will be monitored, and teacher and community feedback will be reviewed (personal communication, October 17, 2018). This will lead to ongoing changes and alterations to the curriculum in order to enhance it and to further support student growth. Changes to the MoE curriculum should be monitored by ABE because ABE offers many equivalent courses, and, while ABE does not follow the MoE system, ABE needs to determine if the changes will affect the success of incoming and outgoing ABE students.

As well, currently there is no information on how successful MoE students will be in post-secondary institutions, as measured by admission rates and classroom success. Post-secondary institutions are currently reviewing the new MoE curriculum to determine admission requirements and course prerequisites. For example, the University of British Columbia (UBC) has published its new holistic approach to admissions. UBC will be taking the student's entire

transcript into account when making admission decisions (University of British Columbia, 2018). Because of the uncertainty of how all colleges and universities' admission processes will respond to the new MoE curriculum, there may be changes to how students will be assessed when entering post-secondary institutions and how successful these students will be. Once a few years of graduates have moved from the MoE system into post-secondary studies, their rate of success will be more apparent. Once this information is available, ABE will have a better sense of the necessity to adapt its courses.

Therefore, implementing another study in 3-5 years, to investigate any changes made by MoE to their curriculum, will help ABE to determine if changes need to be made to support students seeking entrance to post-secondary institutions as well as the work force. This investigation could include conversations with individuals within the MoE, post-secondary institutions admissions offices, as well as fellow instructors teaching at the post-secondary level.

Implementation Plan

The suggested implementation plan for all of these recommendations is based on the need to ensure that ABE students continue to be equally or more prepared to the first class of graduates of the new MoE curriculum in 2019/2020. Also, since post-secondary institutions are currently determining which courses will remain, be removed, or become prerequisites for their programs and courses. ABE needs to ensure its most up-to-date courses are part of this discussion.

Proposed Action	**Proposed Completion Date**
Recommendations reviewed by Steering Committee to determine which will be accepted	April 2019
Identify a Steering Committee Liaison	April 2019
Course comparison due dates assigned by Steering Committee beginning with most important courses in each subject area	April 2019
Comparison of each course completed by either a hired individual in consultation with working groups or by the working groups	April 2020
Steering Committee determines ABE overarching goals.	September 2019
Create goals or overarching outcomes for each subject and course	April 2020

In collaboration with the Indigenous working group, Indigenize each course	April 2021
Draft each course in chosen course template	April 2021
Articulation Handbook reviewed by one person to ensure consistency	September 2021
Follow up study completed in 3 to 5 years	

References

Adult Basic Education Articulation Steering Committee (updated 2019). *ABE Articulation Policy and Procedure Manual.* Internal Adult Basic Education Articulation manual (unpublished). Contact ABE Articulation Steering Committee chair for information.

Alfred, G. T. (1999). *Peace, power, and righteousness: An Indigenous manifesto.* Oxford University Press.

Antoine, A.-n.-h., Mason, R., Mason, R., Palahicky, S., & Rodriguez de France, C. (2018). *Pulling Together: A Guide for Curriculum Developers.* BCcampus. Retrieved from https://opentextbc.ca/indigenizationcurriculumdevelopers/

British Columbia Ministry of Education. (2015). *Introduction to British Columbia's Redesigned Curriculum.* Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/curriculum_intro.pdf

British Columbia Ministry of Education. (2018a). *BC Graduation Program Implementation Guide.*Victoria: Government of British Columbia. Retrieved from https://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/support/graduation/graduation-summary-of-changes.pdf

British Columbia Ministry of Education. (2018b). *BC Graduation Program Policy Guide.* Victoria. Retrieved from https://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/support/graduation/graduation-implementation-guide.pdf

British Columbia Ministry of Education. (2018c). *Competencies*. Retrieved from https://curriculum.gov.bc.ca/competencies

British Columbia Ministry of Education. (2018d). *Core Competencies*. Retrieved from https://curriculum.gov.bc.ca/competencies

British Columbia Ministry of Education. (2018e). *Creative Thinking*. Retrieved from https://curriculum.gov.bc.ca/competencies/creative_thinking

British Columbia Ministry of Education. (2018f). *Critical Thinking*. Retrieved from https://curriculum.gov.bc.ca/competencies/critical_thinking

British Columbia Ministry of Education. (2018g). *Curriculum Overview*. Retrieved from https://curriculum.gov.bc.ca/curriculum/overview

British Columbia Ministry of Education. (2018h). *English Studies 12.* Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/curriculum/english-language-arts/en_english-language-arts_12_english-studies_elab.pdf

British Columbia Ministry of Education. (2018i). *Explorations in Social Studies 11.* Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/curriculum/social-studies/en_social-studies_11_explorations-in-social-studies_elab.pdf

British Columbia Ministry of Education. (2018j). *Mathematics - Pre-calculus 11.* Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/curriculum/mathematics/en_mathematics_11_pre-calculus_elab.pdf

British Columbia Ministry of Education. (2018k). *New Curriculum Info.* Retrieved from https://curriculum.gov.bc.ca/curriculum-info

British Columbia Ministry of Education. (2018l). *Personal Awareness and Responsibility*. Retrieved from https://curriculum.gov.bc.ca/competencies/personal-awareness-responsibility

British Columbia Ministry of Education. (2018m). *Positive Personal & Cultural Identity*. Retrieved from https://curriculum.gov.bc.ca/competencies/ppci

British Columbia Ministry of Education. (2018n). *Social Responsibility*. Retrieved from https://curriculum.gov.bc.ca/competencies/social-responsibility

British Columbia Ministry of Education. (n.d.-a). *A Framework for Classroom Assessment.* Victoria: Government of British Columbia. Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/assessment/a-framework-for-classroom-assessment.pdf

British Columbia Ministry of Education. (n.d.-b). *BC's Redesigned Curriculum: An Orientation Guide.* Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/Curriculum_Brochure.pdf

British Columbia Ministry of Education. (n.d.-c). *Reporting Student Progress (Grades K-9): Guidelines for School Districts.* Victoria: Government of British Columbia. Retrieved from https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/updates/educator_update_student_progress_k-9.pdf

British Columbia School District 8. (2019). *Indigenous Integration K-12*. Retrieved from https://sd8learns.sd8.bc.ca/abed/curricular-connections-K-12/

British Columbia Teachers Federation. (2019). *Graduation Rates in British Columbia.* Vancouver: British Columbia Teachers Federation. Retrieved from https://bctf.ca/publications.aspx?id=48942

Colleges and Institutes of Canada. (2019). *Indigenous Education Protocal*. Retrieved from https://www.collegesinstitutes.ca/policyfocus/indigenous-learners/protocol/

Four Arrows (Don Trent Jacobs). (2013). *Teaching Truly: A Curriculum to Indigenize Mainstream Education.* Bern, Switzerland: Peter Lang Inc.

Government of British Columbia. (2018a). *Equivalency*. Retrieved from https://www2.gov.bc.ca/gov/content/education-training/k-12/support/graduation/getting-credit-to-graduate/equivalency

Government of British Columbia. (2018b). *External Credentials*. Retrieved from https://www2.gov.bc.ca/gov/content/education-training/k-12/support/graduation/getting-credit-to-graduate/external-credentials

Government of British Columbia. (2018c). *Foundation Skills Assessment (FSA)*. Retrieved from https://www2.gov.bc.ca/gov/content/education-training/k-12/administration/program-management/assessment/foundation-skills-assessment

Government of British Columbia. (2018d). *Full Day Kindergarten*. Retrieved from https://www2.gov.bc.ca/gov/content/education-training/k-12/support/full-day-kindergarten

Government of British Columbia. (2018e). *Graduation Requirements*. Retrieved from https://www2.gov.bc.ca/gov/content/education-training/k-12/administration/legislation-policy/public-schools/graduation-requirements

Government of British Columbia. (2018f). *Ministry of Education*. Retrieved from https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/education

Government of British Columbia. (2019a). *BC First Nations & Indigenous People*. Retrieved from https://www.welcomebc.ca/Choose-B-C/Explore-British-Columbia/B-C-First-Nations-Indigenous-People

Government of British Columbia. (2019b). *School Act Part 1 - Interpretation*. Retrieved from http://www.bclaws.ca/civix/document/id/lc/statreg/96412_01#part1

Katz, J. (2018). *Ensouling our schools: A universally designed framework for mental health, well-being, and reconciliation.* Winnipeg: Portage Main Press.

Ministry of Advanced Education, Skills and Training. (2018). *Adult Basic Education: A Guide to Upgrading in British Columbia's Public Post-Secondary Institutions.* Victoria: Province of British Columbia Ministry of Education Advanced Education, Skills and Training. Retrieved from https://www.bctransferguide.ca/docs/ABE1819.pdf

Ministry of Advanced Education, Skills and Training. (2019). *2019/20-2021/22 Service Plan.* Victoria: Government of British Columbia. Retrieved from https://www.bcbudget.gov.bc.ca/2019/sp/pdf/ministry/aest.pdf

Selkirk College. (2018). *School of Academic Upgrading and Development: Academic Upgrading Program Policies.* Retrieved from https://policies.selkirk.ca/media/policiesselkirkca/program/Academic-Upgrading-Program-Policies-2018.pdf

Smith, M. G. (2017). *Speaking our truth: The process of reconciliation.* Victoria: Orca Book Publishers.

St. Clair, R. (2018). A very adult curriculum? How the new BC Education plan reflects the andragogical commitments of adult education. *Adult Education Research Conference,* Victoria, BC. Retrieved from http://newprairiepress.org/aerc/2018/papers/48

University of British Columbia. (2018). *Changes to Undergraduate Admissions for Secondary School Applicants in 2019.* Vancouver: University of British Columbia. Retrieved from https://you.ubc.ca/wp-content/uploads/2018/03/UBC_HolisticAdmissions_2019.pdf

University of Manitoba. (2019*). National Centre for Truth and Reconciliation: Educational Resources*. Retrieved from https://education.nctr.ca/link-to-page-2/

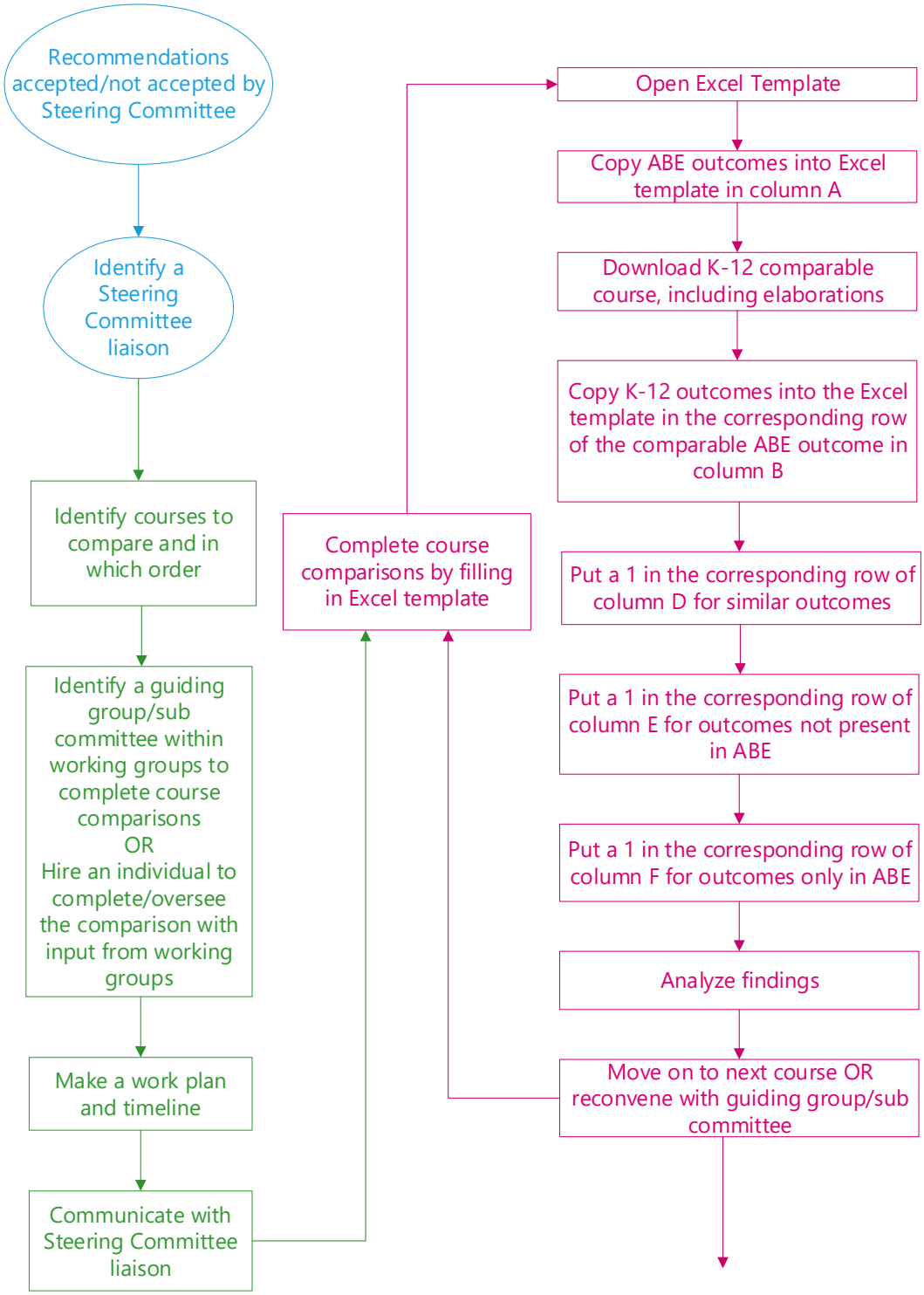
Appendix 1: Guide to Comparing and Analyzing a Course

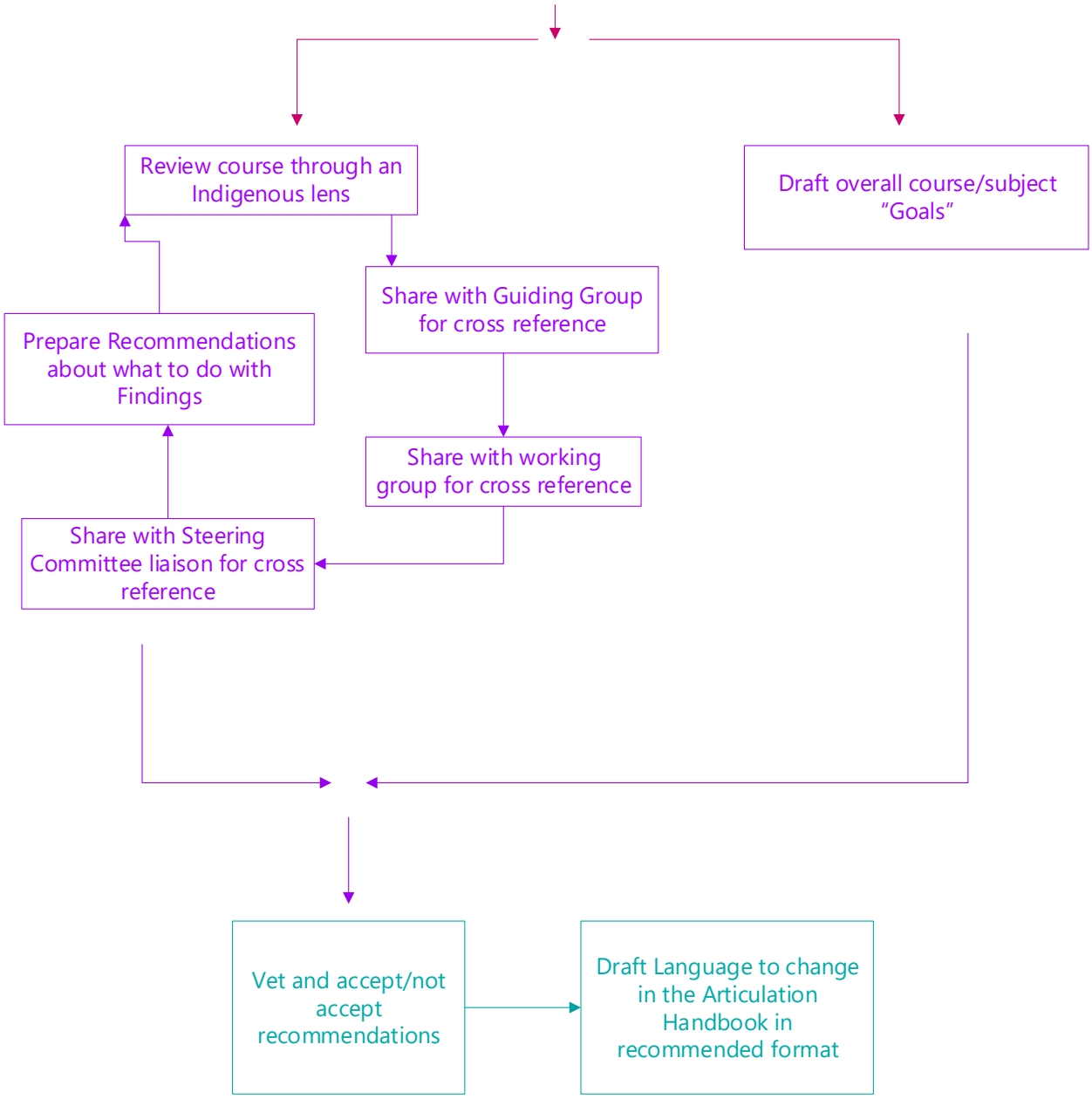
1. Open Template
2. Copy ABE outcomes into ABE column (A)
3. Download MoE comparable course, including elaborations
4. Copy MoE outcomes into the appropriate row in column (B) that corresponds with the similar outcome in ABE
5. Include MoE outcomes that are not comparable at the end of column (B)
6. Put a 1 in row of column (D) for the two outcomes that are similar
7. Put a 1 in row of column (E) for the outcomes that are not present in ABE
8. Put a 1 in row of column (F) for the outcomes that are only in ABE
9. Analyze the graph to determine percent of similarity

Possible questions to ask to determine if change is necessary:

- Does this meet the adult learners' needs?
- Does this meet the knowledge requirement for the next level (eg. prerequisite for provincial or post-secondary)?

1.1 Suggested Workflow Diagram




Review course through an Indigenous lens
Draft overall course/subject "Goals"
Share with Guiding Group for cross reference
Prepare Recommendations about what to do with Findings
Share with working group for cross reference
Share with Steering Committee liaison for cross reference
Vet and accept/not accept recommendations
Draft Language to change in the Articulation Handbook in recommended format

Appendix 2: Resources for Indigenization

Alfred, G.T. (1999). *Peace, power, and righteousness: An Indigenous manifesto*. New York: Oxford University Press.

Antoine, A.-n-h., Mason, R., Mason, R., Palahicky, S., & Rodriguez de France, C. (2018). Pulling together: A guide for indigenization of post-secondary institutions. Retrieved from https://bccampus.ca/projects/indigenization/

Four Arrows (Jacobs, D.T.) (2013). *Teaching truly: A curriculum to indigenize mainstream education,* New York: Peter Lang Books.

Indigenous Education Protocol. Retrieved from https://www.collegesinstitutes.ca/policyfocus/indigenous-learners/protocol/

Indigenous Integration K-12. Retrieved from https://sd8learns.sd8.bc.ca/abed/curricular-connections-K-12/

Katz, J. (2018). *Ensouling our schools: A universally designed framework for mental health, well-being, and reconciliation.* Winnipeg: Portage Main Press.

National Centre for Truth and Reconciliation: Educational Resources. Retrieved from https://education.nctr.ca/link-to-page-2/

Smith, M.G. (2017). *Speaking our truth: The process of reconciliation*. Victoria: Orca Publishing.

Appendix 3: Templates

3.1 Course Comparison Template

Table A

Suggested Course Comparison Template

Legend:		K-2
Italics	Optional Outcomes	
	Outcomes not comparable	

ABE: Course Title	Ministry of Education: Course title		Similar	Not Present in ABE	Only in ABE
Overarching Goals	**Big Ideas**				
		Big Ideas	0	0	0
Goals	**Curricular Competencies**				
		Goals	0	0	0
Required Learning Outcomes	**Curricular Competencies/Content**				
		Content	0	0	0

3.2 Two Template Options for Consistency within the *Articulation Handbook*

Template 1.

Course Name:

Course Description:

Course Goals:

-
-
-
-

Learning Outcomes:

-
-
-
-
-

Template 2.

Course Title:

Course Description:

Course Goals:

-
-
-
-

Learning Outcomes:

Skills	Content

Appendix 4: Detailed Comparison Data for MoE and ABE Courses

All data in the raw outcome-to-outcome comparisons in the following sub-appendices is presented as they are found in each course outline. The only change to the presentation in the course outlines is the order in which the MoE's outcomes are ordered. These outcomes have been presented directly next to the comparable ABE outcome.

4.1 Overall

Table A

Raw Data and Percentages for the Total Similarity of ABE and MoE Courses

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	446.5	202	286	934.5
% of Total Categories	48%	22%	31%	100%

Table B

Raw Data and Percentages for the Curricular Match of ABE and MoE Courses

	Similar	Not Present in ABE	Total
Total Category Count	446.5	202	648.5
% of Total Categories	69%	31%	100%

4.2 English

Table A

Raw Data and Percentages for the Total Similarity of ABE English: Provincial Level and the MoE's English Language Arts – English Studies 12

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	26	15	10	51
% of Total Categories	51%	29%	20%	100%

Table B

Raw Data and Percentages for Curriculum Match of ABE English: Provincial Level to the MoE's English Language Arts – English Studies 12

	Similar	Not Present in ABE	Total
Total Category Count	26	15	41
% of Total Categories	63%	37%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE English: Provincial Level and the MoE's English Language Arts – English Studies 12

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: English: Provincial Level	Ministry of Education: ELA - English Studies 12		Similar	Not Present in ABE	Only in ABE
Required Learning Outcomes	**Big Ideas**				
place a piece of literature in its historical and cultural context	texts are socially, culturally, geographically, and historically constructed.		1		
	the exploration of text and story deepens our understanding of diverse, complex ideas about identity, others, and the world.			1	
	people understand text differently depending on their worldviews and perspectives.			1	
	language shapes ideas and influences others.			1	
	questioning what we hear, read, and view contributes to our ability to be educated and engaged citizens.			1	
	the examination of First Peoples cultures and lived experiences through text builds understanding of Canadians' responsibilities in relation to reconciliation.			1	
		Big Ideas	1	5	0
Goals	**Curricular Competencies**				
		Goals	0	0	0
Required Learning Outcomes	**Curricular Competencies/Content**				
Critical and Creative Thinking					

recognize tone, including irony and understatement in poetry, short stories and drama	think critically, creatively, and reflectively to analyze ideas within, between, and beyond texts		1		
evaluate argument for validity, reliability, currency and objectivity	identify bias, contradictions, distortions, and omissions		1		
recognize structural elements associated with particular standard formats for literary communications	understand and appreciate how different forms, formats, structures, and features of texts reflect a variety of purposes, audiences, and messages		1		
demonstrate an awareness and understanding of the power of language in literary communications; the importance of word choice and organization in furthering the problem solving process (initiating, developing and organizing thought); and the influence of communication formats on language choice and usage	appreciate and understand how language constructs personal, social, and cultural identities		1		
analyze literary elements in various genres	genres: literary or thematic categories (e.g., adventure, fable, fairy tale, fantasy, folklore, historical, horror, legend, mystery, mythology, picture book, science fiction, biography, essay, journalism, manual, memoir, personal narrative, speech)		1		
Speaking and Listening					
interact effectively in formal or informal situations	• demonstrate appropriate speaking and listening skills in a variety of formal and informal contexts for a range of purposes • oral language strategies: includes speaking with expression; connecting to listeners, asking questions to clarify, listening for specifics, summarizing, paraphrasing		1		
adjust speaking style to suit audience, purpose, and situation			1		
use effective presentation aids (e.g. diagrams, line drawings, overheads) to enhance communications			1		
deliver a research-based oral presentation to inform or persuade and respond effectively to feedback	transform ideas and information to create original texts, using various genres, forms, structures, and styles		1		

give and respond effectively to feedback during oral presentations				1	
demonstrate a critical understanding of arguments	express and support an opinion with evidence		1		
Reading, Research and Reference					
evaluate the effectiveness of one's own and others' written material using criteria that include the following: plain language coherence and organization consistency in the application of usage conventions relevance to argument of supporting evidence and examples appropriateness to intended purpose and audience attention to detail	evaluate the relevance, accuracy, and reliability of texts		1		
summarize, make inferences, draw conclusions and critically evaluate	reading strategies: there are many strategies that readers use when making sense of text. Students consider what strategies they need to use to "unpack" text. They employ strategies with increasing independence depending on the purpose, text, and context. strategies include but may not be limited to predicting, inferring, questioning, paraphrasing, using context clues, using text features, visualizing, making connections, summarizing, identifying big ideas, synthesizing, and reflecting.		1		
paraphrase main ideas in written material	transform ideas and information to create original texts, using various genres, forms, structures, and styles		1		
distinguish between implicit and explicit messages				1	

apply prior knowledge and experience to assist understanding of new material	select and apply appropriate strategies in a variety of contexts to comprehend written, oral, visual, and multimodal texts, to guide inquiry, and to extend thinking		1		
use a variety of strategies and sources to gather and evaluate information, including print sources, library resources and the internet	use information for diverse purposes and from a variety of sources		1		
evaluate the influences, writing style and background of particular authors in order to understand their writings.	recognize and appreciate the role of story, narrative, and oral tradition in expressing first peoples perspectives, values, beliefs, and points of view		1		
read and demonstrate an understanding of short stories, poetry, drama and the novel, including works by Canadian authors.	• recognize an increasing range of text structures and how they contribute to meaning • function: the intended purpose of a text		1		
place a piece of literature in its historical and cultural context	recognize the influence of land/place in first peoples and other Canadian texts		1		
describe the social and personal benefits of reading literature	read for enjoyment and to achieve personal goals		1		
Written Communication					
apply a writing process approach (pre-write, draft, revise, edit)	• assess and refine texts to improve their clarity, effectiveness, and impact • text features: elements of the text that are not considered the main body. These may include typography (bold, italic, underlined), font style, guide words, key words, titles,		1		

produce work that demonstrates effective organization, support (e.g. examples, evidence) and sentence structure.	diagrams, captions, labels, maps, charts, illustrations, tables, photographs, and sidebars/text boxes. • writing processes: there are various writing processes depending on context. These may include determining audience and purpose, generating or gathering ideas, free-writing, making notes, drafting, revising, and/or editing. Writers often have very personalized processes when writing. writing is an iterative process • usage: avoiding common usage errors (e.g., double negatives, mixed metaphors, malapropisms, and word misuse) • conventions: common practices of standard punctuation, capitalization, quoting, and Canadian spelling		1		
gather, evaluate, synthesize, and organize information into a research paper of approximately 1500 words using an appropriate documentation style (e.g. MLA, APA, or Chicago)	transform ideas and information to create original texts, using various genres, forms, structures, and styles		1		
understand and avoid plagiarism	use acknowledgements and citations to recognize intellectual property rights		1		
produce writing on demand (e.g. essays, exams)				1	
write literary essays using appropriate structure, development techniques, and literary conventions	• use writing and design processes to plan, develop, and create engaging and meaningful texts for a variety of purposes and audiences • elements of style: stylistic choices that make a specific writer distinguishable from others, including diction, vocabulary, sentence structure, and tone		1		

discuss literary terms (such as conflict, theme, character, mood, tone, irony, foreshadowing, point of view, and setting) in the analysis of works studied	• evaluate how literary elements, techniques, and devices enhance and shape meaning and impact • literary elements and devices: texts use various literary devices, including figurative language, according to purpose and audience.		1		
	metacognitive strategies:			1	
	— thinking about our own thinking, and reflecting on our processes and determining strengths and challenges			1	
	— students employ metacognitive strategies to gain increasing independence in learning.			1	
	narrative structures found in First Peoples texts: for example, circular, iterative, cyclical			1	
	protocols related to ownership of First Peoples oral texts: First Peoples stories often have protocols for when and where they can be shared, who owns them, and who can share them.			1	

	First Peoples oral tradition: Oral traditions are the means by which cultural transmission occurs over generations, other than through written records. Among First Peoples, oral traditions may consist of told stories, songs and/or other types of distilled wisdom or information, often complemented by dance or various forms of visual representation such as carvings or masks. In addition to expressing spiritual and emotional truth (e.g., via symbol and metaphor), these traditions provide a record of literal truth (e.g., regarding events and/or situations). They were integrated into every facet of life and were the basis of First Peoples education systems. They continue to endure in contemporary contexts. In Canadian law, First Peoples oral history is valid evidence of ownership of the land. The Supreme Court of Canada recognizes that First Peoples oral histories are as important as written documents in considering legal issues.			1	
	reconciliation: the movement in Canada to heal the relationship between First Peoples and Canada that was damaged by colonial policies such as the Indian residential school system			1	
Recommended Learning Outcomes					
Cooperative Communication					1
describe the value and limitations of collaborative work					1

collaborate and consult effectively with others in completing communications tasks through means that include:					1
interacting confidently					1
assuming responsibility for roles in teams					1
respecting and promoting respect for the contributions of other team members					1
demonstrating a commitment to the team and to project goals					1
employ advanced problem-solving skills in cooperative communication activities					1
use a variety of resources and technologies when working with others					1
evaluate group processes and individual roles in and contributions to group processes					1
		Content	25	10	10

4.3 Mathematics

Table A

Raw Data and Percentages for the Total Similarity of ABE Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	65	30	50	145
% of Total Categories	45%	21%	34%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

	Similar	Not Present in ABE	Total
Total Category Count	65	30	95
% of Total Categories	68%	32%	100%

Table C

Raw Data and Percentages for the Content Match of ABE Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

	Similar	Not present in ABE	Only in ABE	Total
Total Category Count	65	8	48	121
% of Total Categories	54%	6%	40%	100%

Table D

Raw Data and Percentages for the Curriculum Content Match of ABE Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

	Similar	Not present in ABE	Total
Total Category Count	65	8	73
% of Total Categories	89%	11%	100%

Table E

Raw Outcome-to-Outcome Comparison of ABE Mathematics: Advanced Level – Algebraic and the MoE's Pre-calculus 11

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Mathematics: Advanced Level - Algebraic	**Ministry of Education: Pre-Calculus 11**		**Similar**	**Not Present in ABE**	**Only in ABE**
Overarching Goals	**Big Ideas**				
	algebra allows us to generalize relationships through abstract thinking.			1	
	the meanings of, and connections between, operations extend to powers, radicals, and polynomials.			1	
	quadratic relationships are prevalent in the world around us.			1	
	trigonometry involves using proportional reasoning to solve indirect measurement problems.			1	
to provide students with sufficient mathematical knowledge for academic, career, and technical programs					1
to prepare students to enter Provincial Level mathematics courses.					1
		Big Ideas	0	4	2
Goals	**Curricular Competencies**				

	develop thinking strategies to solve puzzles and play games			1	
	explore, analyze, and apply mathematical ideas using reason, technology, and other tools			1	
	estimate reasonably and demonstrate fluent, flexible, and strategic thinking about number			1	
	model with mathematics in situational contexts			1	
	think creatively and with curiosity and wonder when exploring problems			1	
	develop, demonstrate, and apply conceptual understanding of mathematical ideas through play, story, inquiry, and problem solving			1	
	visualize to explore and illustrate mathematical concepts and relationships			1	
	apply flexible and strategic approaches to solve problems			1	
	solve problems with persistence and a positive disposition			1	
	engage in problem-solving experiences connected with place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures			1	
	explain and justify mathematical ideas and decisions in many ways			1	
	represent mathematical ideas in concrete, pictorial, and symbolic forms			1	
	use mathematical vocabulary and language to contribute to discussions in the classroom			1	

	take risks when offering ideas in classroom discourse			1	
	reflect on mathematical thinking			1	
	connect mathematical concepts with each other, with other areas, and with personal interests			1	
	use mistakes as opportunities to advance learning			1	
	incorporate First Peoples worldviews, perspectives, knowledge, and practices to make connections with mathematical concepts			1	
		Goals	0	18	0
Required Learning Outcomes	**Curricular Competencies/Content**				
Basic Algebraic Skills Review	• real number system classification • powers with rational exponents • positive and negative rational exponents • exponent laws • evaluation using order of operations • numerical and variable bases				
note: a review of the following basic algebraic skills is suggested but not required. it is expected that learners will be able to:			1		
a) perform operations with real numbers including absolute value and exponential notation			1		
b) simplify expressions using rules for order of operations and properties of exponents			1		
c) translate common language into algebraic expressions			1		
d) evaluate algebraic expressions by substitution			1		
e) simplify algebraic expressions with nested parentheses			1		
Solving Linear Equations and Inequalities	**Linear and Quadratic Inequalities** • identifying characteristics of graphs (including domain and range, intercepts, vertex, symmetry), multiple forms,				
a) solve first degree/linear equations in one variable			1		

b) solve simple formulas for a given variable	function notation, extrema • exploring transformations • solving equations (e.g., factoring, quadratic formula, completing the square, graphing, square root method) • connecting equation-solving strategies • connecting equations with functions • solving problems in context • single variable (e.g., 3x-7≤-4,x^2-5x+6>0) • domain and range restrictions from problems in situational contexts • sign analysis: identifying intervals where a function is positive, negative, or zero • symbolic notation for inequality statements, including interval notation		1		
c) solve and graph linear inequalities in one variable			1		
d) write set-builder and/or interval notation for the solution set or graph of an inequality			1		
e) use linear equations, formulas and linear inequalities to solve applied problems			1		
f) find the union or intersection of two sets			1		
g) solve and graph compound inequalities (conjunctions and disjunctions)			1		
h) solve absolute value equations			1		
Graphing, Relations, and Functions					
a) write linear equations in slope-intercept form			1		
b) graph linear equations and non-linear equations using a table of values			1		
c) graph linear equations using the y-intercept and slope and using x- and y-intercepts			1		
d) graph horizontal and vertical lines			1		
e) find the slope of a line given two points on the line			1		
f) find the equation of a line given graphic data: the slope and y-intercept, the slope and one point, or two points on the line			1		
g) determine whether a pair of lines is parallel, perpendicular or neither			1		
h) find the equation of a line parallel or perpendicular to a given line and through a given point			1		

i) use the definition of function and the vertical line test to distinguish between functions and non-functions			1		
j) use and interpret function notation to evaluate functions for given x-values and find x-values for given function values			1		
k) determine the domain and range of a function			1		
l) use a table of values to graph linear functions and non-linear functions such as quadratic, cubic, square root, reciprocal, and absolute value functions					1
m) graph linear inequalities in two variables					1
Optional Outcomes:					
n) graph exponential functions					1
o) analyze functions to determine line of symmetry, vertices, asymptotes, and intercepts					1
p) understand and demonstrate transformations in graphs resulting from the following changes in the defining equation: translation, reflection, dilation					1
q) use a graphing calculator or other appropriate technology to graph equations					1
r) identify an appropriate graph for a given relation					1
s) develop a model function from a given graph or set of data					1
t) perform linear regression using a graphing calculator to fit a linear function to data					1
Systems of Linear Equations and Inequalities	**Linear and Quadratic Inequalities** • identifying characteristics of				

a) solve systems of linear equations in two variables by graphing, substitution and elimination methods	graphs (including domain and range, intercepts, vertex, symmetry), multiple forms, function notation, extrema • solving equations (e.g., factoring, quadratic formula, completing the square, graphing, square root method) • connecting equation-solving strategies • connecting equations with functions • solving problems in context		1		
b) determine if a system of equations will have no, one or an infinite number of solutions			1		
c) use systems of equations to solve applied problems			1		
Optional Outcomes:					
d) solve systems of equations in three variables and applied problems using such systems					1
e) graph the solution for a system of linear inequalities in two variables					1
f) use a graphing calculator or other appropriate technology to solve systems of equations and inequalities					1
Polynomials and Polynomial Functions	**polynomial factoring** • trinomials of the form ax^2+bx+c • difference of squares of the form a^2 x^2-b^2 y^2 • may extend to a(f(x))^2+b(f(x))+c, a^2 (f(x))^2-b^2 (f(x))^2 • greatest common factor of a polynomial				
a) determine the degree of a polynomial			1		
b) distinguish between monomials, binomials, trinomials, and other polynomials			1		
c) add, subtract, multiply polynomials			1		
d) divide polynomials by monomials			1		
e) factor polynomials using an appropriate strategy or a combination of techniques: common factors, difference of squares, difference and sum of cubes, perfect square trinomials, trial/error, or grouping f) solve polynomial			1		

equations using the principle of zero products					
g) solve applied problems using polynomial equations/ functions			1		
Optional Outcomes:					
h) divide polynomials and binomials using long division					1
i) divide polynomials and binomials using synthetic division					1
Rational Expressions, Rational Equations and Variation	**rational expressions and equations** • simplifying and applying operations to rational expressions • identifying non-permissible values • solving equations and identifying any extraneous roots				
a) identify situations and find values for which a rational expression will be undefined			1		
b) simplify rational expressions			1		
c) add, subtract, multiply and divide rational expressions			1		
d) solve rational equations and check			1		
e) solve formulas involving rational expressions for a given variable			1		
f) solve applied problems that can be modeled with rational equations			1		
g) simplify complex fractions			1		
h) express variations in the form of equations (direct, inverse, joint, combined)			1		
i) solve problems involving direct, inverse, joint and combined variation			1		
Radical Expressions and Equations	**radical operations and equations** • simplifying radicals • ordering a set of irrational numbers • performing operations with radicals • solving simple (one radical only)				
a) identify situations and find values for which a radical expression will be undefined			1		
b) write radicals as powers with rational exponents and vice versa			1		

c) use rational exponents to simplify radical expressions	equations algebraically and graphically • identifying domain restrictions and extraneous roots of radical equations		1		
d) simplify, add, subtract, multiply and divide radical expressions (numeric or algebraic)			1		
e) rationalize denominators in fractional expressions containing radicals (including the use of conjugates)			1		
f) solve equations involving radical expressions or powers with rational exponents and check for extraneous roots			1		
g) solve formulas involving powers and square roots for a given variable			1		
h) solve applied problems which can be modeled by radical equations, and determine if solutions are reasonable given the context of the problem			1		
Optional Outcomes:					
i) identify imaginary and complex numbers and express them in standard form					1
j) add, subtract, multiply, and divide complex numbers					1
Quadratic Equations and Functions	**quadratic functions and equations** • solving equations (e.g., factoring, quadratic formula, completing the square, graphing, square root method) • connecting equation-solving strategies • connecting equations with functions • solving problems in context				
a) solve quadratic equations by factoring, principle of square roots, completing the square and the quadratic formula			1		
b) use the discriminant to identify the number and type of solutions of a quadratic equation			1		
c) write a quadratic equation given its solutions			1		
d) solve rational and radical equations reducible to a quadratic			1		

pattern and check that answers are reasonable					
e) solve selected polynomial equations that can be factored simplifying to linear and/or quadratic factors			1		
f) graph quadratic functions of the form $f(x) = a(x -h)^2 + k$ and demonstrate translations, reflections and stretching/shrinking resulting from changes in the function equation			1		
g) find the vertex, line of symmetry, minimum or maximum values, x - and y-intercepts, domain and range, given the function $f(x) = a(x -h)^2 + k$			1		
h) rewrite $f(x) = a x^2 + b x + c$ as $f(x) = a(x -h)^2 + k$ by completing the square			1		
i) solve problems that can be modeled using quadratic equations such as maximum and minimum problems			1		
Optional Outcomes:					
j) solve quadratic equations having complex number solutions					1
k) use a graphing calculator or other appropriate technology to graph and solve quadratic equations					1
l) solve quadratic inequalities by graphing					1
m) solve polynomial and rational inequalities algebraically					1
Trigonometry	**Trigonometry: Non-Right Triangles and Angles in Standard Position**		1		
a) label the sides of a right triangle with respect to a given angle					1

b) determine sine, cosine, and tangent ratios of an angle in a right triangle using the side lengths	trigonometric ratios		1		
c) use a scientific calculator to find the trigonometric value for a given angle and to find an angle given its trigonometric value					1
d) solve right triangles and applied problems using the basic trigonometric ratios, the Pythagorean theorem, and sum of the angles (180°)	use of sine and cosine laws to solve non-right triangles, including ambiguous cases		1		
e) use the Law of Sines and the Law of Cosines to solve non-right (oblique) triangles and applied problems	angles in standard position: - degrees - special angles, as connected with the 30-60-90 and 45-45-90 triangles		1		
Optional Outcomes:					
f) use 1/2 bcsinA to find the area of a triangle					1
g) determine the quadrant for positive and negative angles in standard position					1
h) identify coterminal angles	reference and coterminal angles		1		
i) determine primary trigonometric function values for angles in standard position					1
j) identify reference angles					1
k) evaluate primary trigonometric functions for any angle in a variety of conditions					1
l) solve trigonometric equations involving the primary functions over a specific domain					1
m) use the trigonometric definitions to deduce unknown trigonometric values from given values					1
	contextual and non-contextual problems			1	

	terminal arm			1	
	unit circle			1	
	simple trigonometric equations			1	
Optional Topics: Learners may wish to complete either A or B but these outcomes are not required.					
A. Geometry					
a) recall the properties of parallel lines, similar and congruent figures, polygons, angle relationships, angle measurements, and basic compass and straightedge construction					1
b) demonstrate an understanding of the following properties of a circle:					1
the perpendicular bisector of a chord passes through the centre of the circle					1
the line joining the midpoint of a chord to the centre is perpendicular to the chord					1
the line through the centre, perpendicular to a chord, bisects the chord					1
central angles containing equal chords or arcs are equal (the converse is also true)					1
inscribed angles containing the same or equal chords (on the same side of chord) or arcs are equal					1
an inscribed angle equals half the central angle containing the same or equal					1
chords (on the same side of chord) or arcs are equal					1
an inscribed angle in a semicircle measures 90°					1

opposite angles of a cyclic (inscribed) quadrilateral are supplementary					1
a tangent is perpendicular to the radius at the point of contact (the converse is also true)					1
tangents from an external point are equal					1
the angle between a chord and tangent equals the inscribed angle of the opposite side of the chord (the converse is also true)					1
c) demonstrate and clearly communicate deductive reasoning in the solution of applied problems					1
B. Data Analysis					
a) explain the uses and misuses of statistics					1
b) demonstrate an understanding of mean, median, mode, range, quartiles, percentiles, standard deviation, the normal curve, z-scores, sampling error and confidence intervals					1
c) graphically present data in the form of frequency tables, line graphs, bar graphs, and stem and leaf plots					1
d) design and conduct statistics project, analyze the data, and communicate the outcomes					1
	Financial Literacy: Compound Interest, Investments, Loans			1	
	compound interest			1	
	introduction to investments/loans with regular payments, using technology			1	
	buy/lease			1	
		Content	65	8	48

4.4 Social Science

Table A

Raw Data and Percentages for the Total Similarity of ABE Social Studies: Provincial Level – Law and the MoE's Law Studies 12

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	77	9	45	131
% of Total Categories	59%	7%	34%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE Social Studies: Provincial Level – Law and the MoE's Law Studies 12

	Similar	Not Present in ABE	Total
Total Category Count	77	4	81
% of Total Categories	95%	5%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE Social Studies: Provincial Level – Law and the MoE's Law Studies 12

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Social Science: Provincial Level – Law	**Ministry of Education: Law Studies 12**		**Similar**	**Not Present in ABE**	**Only in ABE**
Required Learning Outcomes	**Big Ideas**				
become aware of some past and present forces shaping society	laws are interpreted, and these interpretations may evolve over time as a society's values and worldviews change.		1		
experience different perspectives on these shaping forces: cultural, economic, gender, geographic, historic, legal, political, psychological, racial, spiritual, etc.	a society's laws and legal framework affect many aspects of people's daily lives.		1		
establish and test hypotheses concerning values					1
extrapolate a common theme from disparate information					1
report on research using MLA/APA standards					1
write essays that demonstrate a synthesis of complex information					1
generate a personal point of view about some aspect of society based on their research					1
create or apply strategies to compare aspects of society					1
	understanding legal rights and responsibilities allows citizens to participate more fully in society.			1	
	laws can maintain the status quo and can also be a force for change.			1	

		Big Ideas	2	2	6
Required Learning Outcomes	**Curricular Competencies**				
revise their point of view through experiencing other social and cultural perspectives	use social studies inquiry processes and skills to ask questions; gather, interpret, and analyze legal concepts, issues, and procedures; and communicate findings and decisions		1		
analyze and assess these issue perspectives to build a point of view	assess the justification for differing legal perspectives after investigating points of contention, reliability of sources, and adequacy of evidence (evidence)		1		
		Goals	2	0	0
Required Learning Outcomes	**Curricular Competencies/Content**				
assess the history and purpose of law in Canadian society by explaining and differentiating among the following terms.	assess and compare the significance and impact of legal systems or codes (significance)		1		
a. differentiate between laws and rules			1		
b. explain the need for laws			1		
c. differentiate between law and justice			1		
d. differentiate between law and morality			1		
e. identify the divisions of law			1		
f. examine the historical influences on and development of Canadian law: early British law, the feudal system, common law, legal reforms, and aboriginal law			1		
analyze the evolution of human rights and how this relates to the Canadian constitution through the following	• analyze continuities and changes in legal systems or codes across jurisdictions (continuity and change)		1		
a. discuss the BNA Act, The Statute Of Westminster, and the Bill Of Rights as it relates to the evolution of human rights	• assess the development and impact of legal systems or codes (cause and consequence)		1		

b. identify the various sections of the Canadian Charter of Rights and Freedoms (CCORAF), including the reasonable limits clause and notwithstanding clauses			1		
c. compare and contrast the federal and provincial divisions of power			1		
d. describe the methods of enforcing rights and freedoms and explain how this relates to rights guaranteed by the CCORAF and human rights legislation and grounds for discrimination			1		
examine how the federal government is structured and relate it to how new laws are made	• the Constitution of Canada and the Canadian Charter of Rights and Freedoms • structures and powers of the federal and provincial courts and administrative tribunals Sample topics: — discriminatory laws and reform processes — importance of independence of the judiciary and lawyers — case and common law — role of deterrence and denunciation in the correctional system — victims' rights and the Canadian Victims Bill of Rights — rights of the accused — appeals process — small claims		1		
a. explain what roles the executive, legislative, and judicial branches of the federal government each have in the formation of law			1		
b. describe the steps as to how a federal law is passed			1		
c. identify the various levels within the Canadian federal and provincial court systems			1		
d. analyze the role of individuals and interest groups in creating new laws			1		
classify the various types of Canadian law	key areas of law such as criminal law, civil law, and family, children's, and youth law Sample topics: — Criminal Code — burden of proof (reasonable doubt versus balance of probability) — the importance of checks and balances to prevent wrongful convictions — Young Offenders Act — Youth Criminal Justice Act		1		
a. identify and explain sources of Canadian law: common, statute, and constitutional			1		
b. identify the categories of law: international, domestic, substantive, procedural, public, and private			1		

examine the nature of crime	explain and infer multiple perspectives on legal systems or codes (perspective)		1		
a. summarize key aspects of the criminal code			1		
b. classify “summary, indictable, and hybrid” offences			1		
c. differentiate the elements of a criminal offense: actus reus and mens rea			1		
d. identify “parties” to an offence			1		
e. explain the criminal court system			1		
examine the process of police investigation, arrest, and bringing the accused to trial	• the Constitution Of Canada and the Canadian Charter Of Rights And Freedoms • structures and powers of the federal and provincial courts and administrative tribunals sample topics: — discriminatory laws and reform processes — importance of independence of the judiciary and lawyers — case and common law — role of deterrence and denunciation in the correctional system — victims’ rights and the Canadian Victims Bill Of Rights — rights of the accused — appeals process — small claims		1		
a. discriminate the levels of police: federal, provincial, municipal, aboriginal b. explain key features of a police investigation and the identification and collection of evidence including the following steps			1		
i. arrest and detention procedures			1		
ii. legal rights and bail procedures			1		
differentiate among the following criminal offences	• make reasoned ethical judgments about legal systems or codes (ethical judgment) • make reasoned ethical judgments about controversial decisions, legislation, or policy (ethical judgment)		1		
a. offences against the person and property			1		
b. other offences, including drug, gambling, fraud, and mischief, driving, and prostitution			1		
classify and examine the following criminal defences			1		
c. mental state defences			1		
d. justification defences			1		
e. other defences, including mistake of law and fact, double jeopardy, alibi, and entrapment			1		

examine the various roles of the following in trial procedure	Canada's correctional system and principles of rehabilitation, punishment, and restoration sample topics: — provincial and federal correctional institutions — educational opportunities in correctional institutions — career training opportunities in correctional institutions — funding structures and financial costs of incarceration — correctional institutions for youth — levels and types of incarceration between and within correctional institutions — community responses to crime — supportive reintegration of paroled offenders into society, risk assessment, and monitoring options		1		
a. courtroom participants and their roles			1		
b. the role of juries and jury selection			1		
c. presentation of evidence and types of evidence			1		
d. charges to the jury			1		
e. reaching a verdict			1		
demonstrate an awareness of the process and objectives of the following in the correctional system	• the Constitution Of Canada and the Canadian Charter Of Rights And Freedoms • structures and powers of the federal and provincial courts and administrative tribunals sample topics: — discriminatory laws and reform processes — importance of independence of the judiciary and lawyers — case and common law — role of deterrence and denunciation in the correctional system — victims' rights and the Canadian Victims Bill Of Rights — rights of the accused — appeals process — small claims • Canada's correctional system and principles of rehabilitation, punishment, and restoration sample topics: — provincial and federal correctional institutions — educational opportunities in correctional institutions		1		
a. sentencing			1		
b. appeals and the types of traditional sentences			1		
c. restorative justice and victims of crime			1		

d. the provincial and federal correctional system	— career training opportunities in correctional institutions — funding structures and financial costs of incarceration — correctional institutions for youth — levels and types of incarceration between and within correctional institutions — community responses to crime — supportive reintegration of paroled offenders into society, risk assessment, and monitoring options		1		
e. parole and pardons			1		
recognize and differentiate key features of the youth criminal justice system through the following documents and procedures	key areas of law such as criminal law, civil law, and family, children's, and youth law Sample topics: — Criminal Code — burden of proof (reasonable doubt versus balance of probability) — the importance of checks and balances to prevent wrongful convictions — Young Offenders Act — Youth Criminal Justice Act		1		
a. the current youth justice act			1		
b. the legal rights of youths			1		
c. youth trial procedures			1		
d. youth sentencing options			1		
explain and differentiate civil law disputes and resolution through the following processes			1		
a. crime and torts			1		
b. private law procedures			1		
c. civil courts and trial procedures			1		
d. civil remedies and sentencing			1		
e. alternative dispute resolutions			1		
differentiate and explain negligence and unintentional torts through the following legal terminologies					1
a. negligence, duty of care, standard of care, and causation					1
b. types of liability					1
c. the defences to negligence					1
d. intentional interference with the person and with property					1
e. the defences to intentional interference					1
f. defamation to character and defences to defamation to character					1

examine marriage, divorce, and the family in a legal framework as they relate to the following terms	key areas of law such as criminal law, civil law, and family, children's, and youth law Sample topics: — Criminal Code — burden of proof (reasonable doubt versus balance of probability) — the importance of checks and balances to prevent wrongful convictions — Young Offenders Act — Youth Criminal Justice Act		1		
a. the changing family structure			1		
b. the essential and formal legal requirements for marriage			1		
c. annulment, separation, access, and divorce			1		
d. the division of family property and asset			1		
e. spousal and child support			1		
f. domestic contracts and common law contracts			1		
distinguish contract law from other types of law as they relate to the following legal terms					1
a. the types of contracts					1
b. the elements of a contract					1
c. invalidating factors					1
d. carrying out the contract					1
e. the sale of goods					1
f. consumer protectionism					1
g. landlord and tenant law					1
h. employment law					1
non-core outcomes					1
identify and explain key legal features of wills, including the following					1
a. the requirements for preparing a will					1
b. who can make, change, and revoke a will					1
c. the terms and duties associated with a will					1
d. provisions in a will					1
e. death without a will					1
f. contesting a will					1

explain how Canadian law relates to First Nations, Metis and Inuit peoples (Aboriginal) in the following areas	Canadian legislation concerning First Peoples indigenous legal orders and traditional laws in Canada and other global jurisdictions		1		
a. identify the purpose and provisions of the current act pertaining to Aboriginals	Sample topics: — treaty processes — 1763 Royal Proclamation — Indian Act — Truth and Reconciliation Commission — Constitution Act, 1982 — right to self-determination/self-government — Tlicho Nation laws in place names — Gitksan oral histories and traditions — Gitksan decentralized decision making — alternative dispute resolution processes, including restorative justice — historical relationships between peoples as a basis to negotiate treaty boundaries — Cree reciprocal legal responsibilities and obligations within kinship networks — Tsimshian injury law and patriarchal resolution — matrilineal and patrilineal kinship networks		1		
b. examine the history of treaty making			1		
c. examine the arguments for and against recognition of Aboriginal title			1		
d. discuss the process of negotiating land claim agreements			1		
e. describe the relationship of the present Constitution to aboriginal and treaty rights.			1		
explain Canadian emigration and immigration law including the following events and issues					1
a. the main events in the history of immigration and immigration policy and law					1
b. the main provisions of the current act pertaining to immigrants					1
c. the terms associated with immigration and emigration					1
d. the 'points system' for selecting immigrants					1
e. how refugee claims are made and decided upon					1
f. the appeals procedures					1

g. identify key issues in Canadian immigration law					1
discuss current law as it relates to the environment with consideration of					1
a. major legal, social, and economic issues related to protecting the environment					1
b. how tort law is applicable to protecting the environmental					1
c. Canada's current environmental protection act					1
d. Canada's law as it relates to parks and endangered species					1
e. the need for international cooperation and law					1
f. the effect of globalization on Canadian law					1
	structures and roles of global dispute resolution agencies and courts			1	
	Sample topics: — International Court of Justice — World Trade Organization — United Nations — trade disputes and agreements — global initiatives on climate change			1	
				1	
				1	
				1	
				1	
				1	
				1	
		Content	73	7	39

4.5 General and Applied Science

Table A

Raw Data and Percentages for the Total Similarity of ABE General and Applied Science: Intermediate Level and the MoE's Science 10

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	14	36	55	105
% of Total Categories	13%	34%	53%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE General and Applied Science: Intermediate Level and the MoE's Science 10

	Similar	Not Present in ABE	Total
Total Category Count	14	36	50
% of Total Categories	28%	72%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE General and Applied Science: Intermediate Level and the MoE's Science 10

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: General and Applied Science Intermediate	**Ministry of Education: Science 10**		**Similar**	**Not Present in ABE**	**Only in ABE**
Overarching Goals	**Big Ideas**				
	DNA is the basis for the diversity of living things.			1	
	energy change is required as atoms rearrange in chemical processes.			1	
	energy is conserved, and its transformation can affect living things and the environment			1	
	the formation of the universe can be explained by the big bang theory.			1	
		Big Ideas	0	4	0
Goals	**Curricular Competencies/Content**				
to develop critical thinking skills;	critically analyze the validity of information in secondary sources and evaluate the approaches used to solve problems		1		
to increase their understanding of the concepts and principles of science;	demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest		1		
to recognize the uses and limitations of scientific methods;	• evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled • demonstrate an awareness of assumptions, question information given, and identify bias in their own work and secondary sources		1		

to acquire the skills and understand the processes and applications of science.	use knowledge of scientific concepts to draw conclusions that are consistent with evidence		1		
understand and gain an appreciation for the methods by which scientific knowledge is obtained and organized, so that the learner can apply these methods of problem solving to everyday life.	• transfer and apply learning to new situations • contribute to finding solutions to problems at a local and/or global level through inquiry • contribute to care for self, others, community, and world through individual or collaborative approaches		1		
understand the fundamental concepts and terminology from the three primary branches of science: biology, chemistry, and physics. some learners may also study other branches of science such as astronomy, geology, or meteorology. the exposure to these subject areas should show the variation, diversity and similarities between all branches of science as well as illustrate the effects of science in the learner's everyday life.	• formulate physical or mental theoretical models to describe a phenomenon • communicate scientific ideas, claims, information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations • connect scientific explorations to careers in science		1		
understand the methodology of a controlled experiment, and the necessity of performing experiments in order to acquire scientific knowledge.	• consider the role of scientists in innovation • generate and introduce new or refined ideas when problem solving		1		

all intermediate general science courses must include experiment and/or field time of at least 10% of the total time. experiment and/or field exercises should be relevant to the selected units and emphasize those techniques and skills appropriate for this level of course.	• collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative) • evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions • describe specific ways to improve their investigation methods and the quality of the data • ensure that safety and ethical guidelines are followed in their investigations • seek and analyze patterns, trends, and connections in data, including describing relationships between variables (dependent and independent) and identifying inconsistencies • formulate multiple hypotheses and predict multiple outcomes • assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods and those of others		1		
	analyze cause-and-effect relationships			1	
	consider the changes in knowledge over time as tools and technologies have developed			1	
	exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations and to evaluate claims in secondary sources			1	
	consider social, ethical, and environmental implications of the findings from their own and others' investigations			1	
	apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information			1	
	express and reflect on a variety of experiences, perspectives, and worldviews through place			1	

		Goals	8	6	0
Required Learning Outcomes	**Curricular Competencies/Content**				
Introductory Science					1
define science and its limits					1
explain and use the scientific method					1
demonstrate the skills and techniques of science. (experimental design, use of tables, graphs and calculations)	construct, analyze, and interpret graphs (including interpolation and extrapolation), models, and/or diagrams		1		
use appropriate instruments to make measurements	select and use appropriate equipment, including digital technologies, to systematically and accurately collect and record data		1		
solve problems using si units					1
relate science and technology to our modern world	• make observations aimed at identifying their own questions, including increasingly complex ones, about the natural world • experience and interpret the local environment		1		
Human Biology					1
explain the importance of and inter-dependence between biological systems as covered in one of the following units:					1
1. nutrition					1
describe the energy needs of the body					1
identify nutrients needed by the body					1
plan a healthy diet					1
identify special foods and diets					1
describe worldwide food needs					1
2. human biology					1
identify the parts of the skeletal and muscular systems					1
explain the function of blood and trace its circulation					1
identify the parts and functions of the respiratory system					1
describe the digestive system and the function of the digestive organs					1

identify the parts of the nervous system (this topic may be substituted for one of the above: identify and explain the reproductive system)					1
3. the cell					1
identify the parts of the microscope and demonstrate its use.					1
explain the theory, structure and function of the cell					1
describe cellular processes					1
define cell division	• mutation: — positive, negative, and neutral impacts — mutagens and carcinogens		1		
diagram cell organization					1
Chemistry					1
to acquire a general understanding of the structure of matter and the organization of the periodic table.					1
describe the different states of matter					1
describe how matter is organized into elements, compounds and mixtures.					1
identify the subatomic components of atoms					1
use the periodic table to determine the properties of elements and their characteristic behaviours					1
describe the organization of the periodic table					1
categorize compounds as ionic or covalent					1
name a simple compounds from its formula					1
write the formula for a simple compound					1
Physics					1
do one of the following:					1
1. machines					1
define force and work					1
apply the concept of work to simple machines to solve quantitative problems					1

solve problems involving simple machines, levers, inclined planes, wedges, pulleys, wheels and axles					1
solve problems involving other machines: gears, pulley systems, hydraulic systems					1
2. energy					1
define basic concepts: force, work, energy, conservation law, power					1
distinguish between forms of energy	• potential: stored energy (gravitational pe = mgh) • kinetic: energy of motion (translational ke = 1/2 mv2) • nuclear energy: — fission versus fusion — nuclear technologies and implications (e.g., nuclear power, medical isotopes, tanning beds, dental x-rays, food irradiation, radioactive dating) — positive and negative impacts, including environmental, health, economic		1		
solve quantitative problems involving thermal energy	• transformation of energy: — transfer of energy in closed and open systems — heat (q = mcΔ t)		1		
solve quantitative problems involving electrical energy					1
solve quantitative problems involving conservation of energy					1
3. electrical circuits					1
distinguish between ac and dc circuits					1
choose and use appropriate instruments to measure voltage and current					1
solve quantitative problems involving ohm's law					1
solve quantitative problems involving circuits					1
explain the use of switches, fuses, and other components of an electrical circuit					1
demonstrate appropriate safety precautions					1
4. motion in one dimension					1

solve quantitative problems involving velocity					1
solve quantitative problems involving acceleration					1
The Fifth Unit					1
may be chosen from the above or from other topics such as disease, drugs, chemical reactions and equations, weather, astronomy, earth science, environmental issues	may be found below.				
	DNA structure and function:			1	
	—genes and chromosomes			1	
	—gene expression			1	
	—interactions of genes and the environment			1	
	· patterns of inheritance: Mendelian genetics, Punnett squares, complete dominance, co-dominance, incomplete dominance, sex-linked inheritance, human genetics			1	
	natural selection:			1	
	—adaptive radiation			1	
	—selection pressure (e.g., adaptation and extinction, invasive species)			1	
	—adaptations			1	
	—extinctions			1	
	· artificial selection:			1	
	—in agriculture (e.g., monoculture, polyculture, food sustainability)			1	
	—breeding (plant and animal)			1	
	applied genetics: genomics, gmos, gene therapy, cloning, stem cells, reproductive technology, species, population and ecosystems, forensics, genetic engineering			1	
	ethical considerations: the health, environmental, social, and political implications of modern genetics			1	
	chemical reactions: types include synthesis, decomposition, single-double replacement, combustion/oxidation, neutralization			1	
	energy change:			1	
	—exothermic and endothermic			1	
	—activation energy			1	

	practical applications and implications of chemical processes: household chemical safety (e.g., ammonia and bleach), combustion (e.g., forest fire, fire triangle, kindling temperature, ignition point, oxygen concentration), polymer chemistry, semiconductors, resource extraction (e.g., ore, fracking), pulp and paper chemistry, food chemistry, corrosion/prevention, tanning, traditional medicines, phytochemistry, pharmaceuticals, environmental remediation, water quality, oil spill cleanup			1	
	radiation: —ionizing versus non-ionizing —alpha, beta, gamma			1	
				1	
				1	
	impacts of energy transformations: pollution, habitat destruction, carbon dioxide output			1	
	acid-base chemistry				
	law of conservation of energy				
	formation of the universe: — big bang theory				
	components of the universe over time: changes to energy, matter, fundamental forces			1	
	astronomical data and collection methods: different types of data are collected and analyzed as evidence to support theories about the universe (e.g., radio telescopes, background microwave radiation, red and blue Doppler shift, Mars rover, SNOLAB, ISS, Canadarm/Dextre)			1	
		Content	6	26	55

4.6 Biology

Table A

Raw Data and Percentages for the Total Similarity of ABE Biology: Advanced Level and the MoE's Life Sciences 11

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	21	1	21	43
% of Total Categories	49%	2%	49%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE Biology: Advanced Level and the MoE's Life Sciences 11

	Similar	Not Present in ABE	Total
Total Category Count	21	1	22
% of Total Categories	95%	5%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE Biology: Advanced Level and the MoE's Life Sciences 11

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Biology Advanced	**Ministry of Education: Life Sciences 11**		**Similar**	**Not Present in ABE**	**Only in ABE**
Required Learning Outcomes	**Big Ideas**				
identify the levels of biological organization	life is a result of interactions at the molecular and cellular levels.		1		
explain the mechanisms of evolution	• evolution occurs at the population level • organisms are grouped based on common characteristics.		1		
		Big Ideas	2	0	0
Goals/Required Learning Outcomes	**Curricular Competencies/Content**				
students gain the knowledge and skills to build an appreciation and understanding of the natural world and their role in it.	• demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest • experience and interpret the local environment		1		
obtain the prerequisite knowledge and skills that will provide a basis for further academic and career / vocational education and training	connect scientific explorations to careers in science		1		
demonstrate awareness of the diversity and interconnectedness of organisms					1

use scientific methods to evaluate information and to interpret experiences	• collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative) • use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data • exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources		1		
communicate about life sciences in their own words and cite references appropriately	critically analyze the validity of information in primary and secondary sources and evaluate the approaches used to solve problems		1		
work independently and also as part of a team, where appropriate	collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative)		1		
evaluate media regarding issues in life sciences	demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources		1		
demonstrate an awareness of ethical issues relevant to life sciences	• assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods • consider social, ethical, and environmental implications of the findings from their own and others' investigations		1		

all biology courses must include a minimum of seven dedicated laboratory and /or fieldwork activities, wherein biology learners will: • write a lab report • demonstrate familiarity with common lab and field equipment and its use • conduct lab and field procedures safely and ethically • demonstrate microscope skills • collect and record data effectively • analyze and interpret data collected • communicate results and conclusions	• make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world • formulate multiple hypotheses and predict multiple outcomes • seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies • construct, analyze, and interpret graphs, models, and/or diagrams • use knowledge of scientific concepts to draw conclusions that are consistent with evidence • analyze cause-and-effect relationships • evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions • describe specific ways to improve their investigation methods and the quality of their data • evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled • assess risks in the context of personal safety and social responsibility • apply the concepts of accuracy and precision to experimental procedures and data: -significant figures -uncertainty -scientific notation		1		
optional outcome: *First Peoples' ecological knowledge and practices*	apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information		1		

the study of biology helps cultivate critical thinking skills and fosters students' ability to make sound and ethical decisions about themselves, their homes, their workplaces and the global community.					1
the courses should inspire further discovery and exploration in the life sciences.					1
	consider the changes in knowledge over time as tools and technologies have developed			1	
		Goals	8	1	3
Required Learning Outcomes	**Curricular Competencies/Content**				
Cell Biology					
identify the levels of biological organization	**levels of organization:** molecular, cellular, tissue, organ, organ system, organism, population, community, ecosystem		1		
describe organic macromolecules and their monomers: proteins carbohydrates lipids nucleic acids					1
describe the cell theory					1
describe and compare major structures and their functions in prokaryotic and eukaryotic cells	cell structure and function: prokaryotic and eukaryotic unicellular and multicellular cell specialization		1		
outline the processes of photosynthesis and cellular respiration and explain their roles in living systems	energy transformations: • cellular respiration: glucose broken down in the presence of water yields energy (atp) and carbon dioxide • photosynthesis: consumes carbon dioxide and water, produces oxygen and sugars		1		
explain cell division in terms of sexual and asexual reproduction	• single-celled and multi-celled organisms: —prokaryotic and eukaryotic —aerobic and anaerobic —sexual and asexual reproduction • reproduction: mitosis, meiosis, budding, conjugation, binary fission		1		
Evolution					

cite evidence for evolutionary theory	• microevolution: change within a species that occurs over time in a population • changes in DNA: mutations, population geneticsmacroevolution:-major evolutionary changes over long periods of time-origin of new species • speciation:-neo-Darwinism (gradualism)-punctuated equilibrium-genetic drift-sexual selection-adaptive radiation • processes of macroevolution:-divergent-convergent-co-evolution • evidence for macroevolution: • embryology—mitochondrial DNA—molecular evolution—fossil record • evidence for phylogenetic relationships: DNA, biochemistry, anatomy, embryology, fossil evidence, biogeography		1		
explain the mechanisms of evolution			1		
discuss the origin of life					1
diversity of life	**natural selection:** mechanisms of gradual change		1		
demonstrate an understanding of classification	• interrelationships between organisms: plants as indicators of timing for corresponding events, decaying animals as plant nutrients		1		
identify major taxonomic groups	• trends in complexity: symmetry, coelom, tissue development, transport, gas exchange, cephalization, reproduction, vascularization, alternation of generations, seed production • taxonomic principles: —taxa: kingdom, phylum, class, order, family, genus, species —phylogenetic tree (cladogram) —dichotomous key		1		

identify structures and distinguishing characteristics and describe life processes for the following groups: viruses bacteria protists fungi plants – nonvascular and vascular animals – invertebrates and vertebrates	• viruses: -at the boundary of living and non-living -lytic and lysogenic cycles -viral disease: immunity, vaccines, herd immunity, reducing the • spread of viral diseases (e.g., H1N1, avian flu, HIV, Ebola, STIs) • domains and kingdoms: —unifying criteria for classification —hierarchical nature of diversity —changing models based on emerging knowledge		1		
Ecology					1
describe energy flow and nutrient cycles within ecosystems					1
characterize ecosystems and the interactions therein					1
describe ecological changes over time					1
define biosphere and characterize biomes					1
explore and analyze ecological issues, such as: climate change habitat destruction and/or restoration biodiversity species extinctions environmental stewardship					1
Options					
First Peoples' ecological knowledge and practices	First Peoples knowledge on classification: —classification of animals based on use (e.g., traditional clothing, food, hunting seasons) —classification of BC plants based on use (e.g., food, medicine)		1		
bioethics					1
ethnobotany					1
resource management					1
applied ecology					1
methods in ecology					1
behavioural ecology					1
genetics					1
parasitology					1
local topics					1

	Content	11	0	18

4.7 Chemistry

Table A

Raw Data and Percentages for the Total Similarity of ABE Chemistry: Advanced Level and the MoE's Chemistry 11

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	44	13	28	85
% of Total Categories	52%	15%	33%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE Chemistry: Advanced Level and the MoE's Chemistry 11

	Similar	Not Present in ABE	Total
Total Category Count	44	13	57
% of Total Categories	77%	23%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE Chemistry: Advanced Level and the MoE's Chemistry 11

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Chemistry Advanced	Ministry of Education: Chemistry 11		Similar	Not Present in ABE	Only in ABE
Required Learning Outcomes	**Big Ideas**				
analyze the historical development of atomic theory	atoms and molecules are building blocks of matter.		1		
	organic chemistry and its applications have significant implications for human health, society, and the environment.			1	
define a mole and its significance	the mole is a quantity used to make atoms and molecules measurable.		1		
describe Dalton's Atomic Theory and the Law of Constant Composition	matter and energy are conserved in chemical reactions.		1		
	solubility within a solution is determined by the nature of the solute and the solvent.			1	
		Big Ideas	3	2	0
Goals	**Curricular Competencies/Content**				
obtain the prerequisite body of knowledge and skills that will provide a basis for further academic and career / vocational education and training	• demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest • connect scientific explorations to careers in science • consider the role of scientists in innovation		1		

demonstrate an awareness of chemistry in everyday life	make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world		1		
demonstrate an awareness of chemistry in solutions to environmental challenges	• experience and interpret the local environment • consider social, ethical, and environmental implications of the findings from their own and others' investigations		1		
apply scientific method to investigate phenomena	• formulate multiple hypotheses and predict multiple outcomes • seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies • formulate physical or mental theoretical models to describe a phenomenon		1		
communicate effectively using the language of chemistry	• apply the concepts of accuracy and precision to experimental procedures and data: —significant figures —uncertainty —scientific notation • communicate scientific ideas and information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations		1		
carry out all duties in an ethical, professional manner, including the collection and treatment of data	assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods		1		
work independently and also as part of a team, where appropriate	collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative)		1		
handle equipment and chemicals in a safe and effective manner with regard to personal safety and the safety of others	assess risks in the context of personal safety and social responsibility		1		
		Goals	8	0	0

Required Learning Outcomes	Curricular Competencies/Content				
Measurement	**dimensional analysis:**		1		
demonstrate the concepts of precision and accuracy and how they differ, utilizing significant figures	— factor-label method (unit-analysis method)		1		
perform calculations using scientific notation	— calculation of mass and molar quantities (using significant figures)		1		
perform conversions with the SI system	use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data		1		
Properties of Substances					1
differentiate between the phases of matter					1
identify chemical or physical properties of substances					1
describe Dalton's Atomic Theory and the Law of Constant Composition					1
Periodic Trends					1
use the periodic table to determine atomic composition of isotopes					1
use the periodic table to predict electron arrangement of chemical families in order to predict trends in ion charge, reactivity, ionization energy, electronegativity, atomic radii, and ionic radii					1
Atomic Structure					1
analyze the historical development of atomic theory	• critically analyze the validity of information in primary and secondary sources and evaluate the approaches used to solve problems • consider the changes in knowledge over time as tools and technologies have developed		1		

describe the Bohr and Wave Mechanical model of the atom and cite evidence for these models including absorption and emission spectra and their use in modern technology	• exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources • demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources		1		
Mole Concept	the mole		1		
define a mole and its significance			1		
perform calculations including molar and formula mass, mole to mass conversions, and percent composition by mass of compounds			1		
Bonding	**bonds/forces:**		1		
define covalent and ionic bonding	— covalent bond		1		
construct the formulas of compounds	— hydrogen bond		1		
use electronegativity to predict bond types	— intra- and intermolecular forces		1		
	— impact on properties		1		
draw Lewis structures, predict molecular shapes, and determine polarity	chemical bonding: Lewis structures of compounds, polarity		1		
Nomenclature					1
write names for compounds given the formulae and write formulae for compounds given the names for the following types of compounds: - covalent compounds - ionic compounds - compounds containing polyatomic ions - compounds containing transition metals - acids					1
					1
					1
					1
					1
					1
Chemical Reactions	reactions: predicting products, reactants and energy changes (ΔH)		1		
balance equations					1

classify and predict single and double replacement reactions, combustion reactions, and acid-base neutralizations					1
classify synthesis, decomposition, exothermic and endothermic reactions					1
perform stoichiometric calculations including mass-to-mass, limiting reagent, and percent yield	stoichiometric calculations: —mass —number of molecules —gas volumes —molar quantities —excess and limiting reactants		1		
Solutions					1
predict solubility and conductivity of polar and non-polar compounds	solubility: dissociation of ions, dissociation equation		1		
define Arrhenius acids and bases					1
relate the pH scale to acids and bases					1
perform calculations involving dilutions					1
perform stiochiometric calculations involving solutions including titrations	stoichiometric calculations in aqueous solutions: —molarity —dilution effect —concentration of ions in solution when two solutions are mixed		1		
Organic Chemistry					1
classify substances as organic					1
differentiate the various types of bonding between carbon atoms					1
write names and draw structures of hydrocarbons					1
categorize organic compounds based on their functional groups	organic compounds: names, structures, geometry		1		
Laboratories	• collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data • evaluate their methods and experimental conditions, including		1		
a minimum of eight labs are to be completed covering the core concepts.			1		
list the safety and protective equipment available in a laboratory setting			1		

demonstrate the appropriate procedures and techniques for dealing with particular hazards and hazardous materials	identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions • describe specific ways to improve their investigation methods and the quality of their data • evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled • apply the concepts of accuracy and precision to experimental procedures and data: — significant figures — uncertainty — scientific notation		1		
follow instructions and procedures			1		
handle appropriate equipment for measuring mass, volume, and temperature			1		
prepare solutions			1		
perform titrations			1		
collect and record data effectively			1		
analyze and interpret data			1		
communicate results and conclusions			1		
	apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information			1	
	construct, analyze, and interpret graphs, models, and/or diagrams			1	
	use knowledge of scientific concepts to draw conclusions that are consistent with evidence			1	
	analyze cause-and-effect relationships			1	
	contribute to care for self, others, community, and world through individual or collaborative approaches			1	
	cooperatively design projects with local and/or global connections and applications			1	
	contribute to finding solutions to problems at a local and/or global level through inquiry			1	
	implement multiple strategies to solve problems in real-life, applied, and conceptual situations			1	
	express and reflect on a variety of experiences, perspectives, and worldviews through place			1	

	chemical processes: First Peoples traditional practices (e.g., tanning hides; preparation of food, soap, and natural bleach), smelting, pulp and paper production, food chemistry, photosynthesis and cellular respiration, development of petrochemical smog			1	
	analysis techniques: e.g., dissolved oxygen, pH, nitrates, phosphorus			1	
Options					
organic chemistry	applications of organic chemistry: First Peoples traditional practices (e.g., medicines), pharmaceuticals, petrochemicals, polymers, cosmetics, metabolism, agriculture, food, biotechnology		1		
nuclear chemistry					1
gas laws					1
environmental ethics	green chemistry: development of sustainable processes and technologies that reduce negative impacts on the environment (e.g., reducing toxicity, designing benign solvents, increasing energy efficiency)		1		
		Content	33	11	28

4.8 Physics

Table A

Raw Data and Percentages for the Total Similarity of ABE Physics: Advanced Level and the MoE's Physics 11

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	42.5	14	16	72.5
% of Total Categories	59%	19%	22%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE Physics: Advanced Level and the MoE's Physics 11

	Similar	Not Present in ABE	Total
Total Category Count	42.5	14	56.5
% of Total Categories	75%	25%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE Physics: Advanced Level and the MoE's Physics 11

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Physics Advanced	Ministry of Education: Physics 11		Similar	Not Present in ABE	Only in ABE
Overarching Goals	**Big Ideas**				
	an object's motion can be predicted, analyzed, and described.			1	
	forces influence the motion of an object.			1	
	energy is found in different forms, is conserved, and has the ability to do work			1	
	mechanical waves transfer energy but not matter.			1	
		Big Ideas	0	4	0
Goals/Required Learning Outcomes	**Curricular Competencies/Content**				
use the language and concepts of physics to describe how physical processes, devices and phenomena work	• use knowledge of scientific concepts to draw conclusions that are consistent with evidence		1		
obtain the prerequisite body of knowledge and skills that will provide a basis for further academic and career/vocational training	• demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest • consider the role of scientists in innovation • connect scientific explorations to careers in science		1		

use scientific processes in an ethical and appropriate manner	consider social, ethical, and environmental implications of the findings from their own and others' investigations		1		
appreciate and apply the physics of everyday phenomena	formulate physical or mental theoretical models to describe a phenomenon		1		
link physics to their own practical experience	• implement multiple strategies to solve problems in real-life, applied, and conceptual situations • experience and interpret the local environment		1		
work effectively as a member of a team in a responsible and respectful manner	collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative)		1		
handle equipment and lab materials in a responsible and effective manner with regard to their own safety and the safety of others	assess risks in the context of personal safety and social responsibility		1		
apply scientific concepts, recognizing their strengths and weaknesses, to broader societal issues	• co-operatively design projects with local and/or global connections and applications • critically analyze the validity of information in primary and secondary sources and evaluate the approaches used to solve problems		1		
critically evaluate controversial points of view around issues where science offers information or perspective	demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources		1		

apply mathematical skills to solve physics based problems	• construct, analyze, and interpret graphs, models, and/or diagrams • graphical methods: —plotting of linear relationships given a physical model (e.g., uniform motion, resistance) —calculation of the slope of a line of best fit, including significant figures and appropriate units —interpolation and extrapolation data from a constructed graph (e.g., position, instantaneous velocity) —calculations and interpretations of area under the curve on a constructed graph (e.g., displacement, work)		1		
develop critical thinking skill	seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies		1		
		Goals	11	0	0
Required Learning Outcomes	**Curricular Competencies/Content**				
Measurement			1		
solve problems involving SI units	use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data		1		
maintain the correct number of significant numbers in calculations	apply the concepts of accuracy and precision to experimental procedures and data: —significant figures —uncertainty —scientific notation		1		
use uncertainties in measurement			1		
define vector and scalar quantities	vector and scalar quantities: —addition and subtraction —right-angle triangle trigonometry		1		
Kinematics			1		
use the language and concepts of kinematics to describe motion	projectile motion: 1D and 2D, including:		0.5		

analyze and solve kinematics in one dimension	— vertical launch		1		
construct and interpret displacement versus time curves	— horizontal launch		1		
construct and interpret velocity versus time graphs	— angled launch		1		
solve problems involving uniform acceleration	uniform and accelerated motion: graphical and quantitative analysis		1		
Dynamics			1		
use the language and concepts of dynamics to describe forces and energy	contact forces: for example, normal force, spring force, tension force, frictional force		1		
analyze and solve dynamics in one dimension using free body diagrams					1
apply Newton's laws of motion in one dimension	Newton's laws of motion: —first: the concept of mass as a measure of inertia —second: net force from one or more forces —third: actions/reactions happen at the same time in pairs		1		
solve problems involving:	**forces in systems:**		1		
friction forces			1		
gravity forces including newton's law of universal gravitation	— one-body and multi-body systems		1		
analyze and solve problems in kinetic and potential energy	— inclined planes		1		
analyze and solve problems in energy conservation	— angled forces		1		
solve problems involving work and power	— elevators		1		
solve problems involving impulse and conservation of momentum in one dimension.	conservation of energy; principle of work and energy		1		
Electricity			1		

use the language and concepts of electricity to describe electrical phenomena	power and efficiency: —mechanical and electrical (e.g., light bulbs, simple machines, motors, steam engines, kettle) —numerical examples (e.g., resistance, power, and efficiency in circuits) simple machines: lever, ramp, wedge, pulley, screw, wheel and axle		1		
analyze and solve problems using Coulomb's law					1
analyze and solve problems involving Ohm's law	electric circuits (dc), Ohm's law, and Kirchhoff's laws: including terminal voltage versus electromotive force (emf) (e.g., safety, power distribution, fuses/breakers, switches, overload, short circuits, alternators)		1		
define and distinguish between electric potential difference, resistance and current			1		
solve simple DC resistance problems involving series, parallel and combination circuit			1		
Heat			1		
use the language and concepts of thermodynamics to describe the transfer of heat energy					1
define and distinguish between temperature, heat energy and specific heat capacity	• specific heat capacity • thermal equilibrium: as an application of law of conservation of energy (e.g., calorimeter)		1		
analyze and solve problems in heat energy					1
demonstrate an understanding of the different mechanisms of heat transfer					1
Waves and Optics			1		
use the language and concepts of physics to describe wave phenomena including:					1
define and distinguish between amplitude, wavelength, frequency, wave speed and period	propagation of waves: —transverse versus longitudinal —linear versus circular		1		

analyze and solve problems involving wave phenomena – refraction, reflection, total internal reflection	properties and behaviours: —properties: differences between the properties of a wave and the properties of the medium, periodic versus pulse —behaviours: reflection (open and fixed end), refraction, transmission, diffraction, interference, Doppler shift, standing waves, interference patterns, law of superposition		1		
describe various wave phenomena and the conditions which produce them	• characteristics: for example, pitch, volume, speed, Doppler effect, sonic boom • frequency: for example, harmonic, fundamental/natural, beat frequency		1		
solve problems involving lens equation and mirror equation					1
construct ray diagrams for mirrors and lenses					1
Laboratories:					1
there should be one laboratory from each topic and a minimum of seven laboratories. laboratory skills must include:					1
collecting data through observation:					1
record a measurement to the appropriate level of precision					1
recognize that all measured values have an uncertainty					1
constructing graphs:	• graphical methods: — plotting of linear relationships given a physical model (e.g., uniform motion, resistance) — calculation of the slope of a line of best fit, including significant figures and appropriate units — interpolation and extrapolation data from a constructed graph (e.g., position, instantaneous velocity) — calculations and interpretations of area				
choose appropriate scales					
determine line of best fit					
label correctly					
drawing conclusions from observations and data:					
identify and discuss sources of error					

calculate and interpret the slope of a line	under the curve on a constructed graph (e.g., displacement, work)				
relate conclusion to objectives					1
calculating experimental error:	• evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions • describe specific ways to improve their investigation methods and the quality of their data				
determine % error and % difference where appropriate					
completing formal lab reports	communicate scientific ideas and information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations				
	apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information			1	
	applications of simple machines by First Peoples			1	
	express and reflect on a variety of experiences, perspectives, and worldviews through place			1	
	formulate physical or mental theoretical models to describe a phenomenon			1	
	contribute to finding solutions to problems at a local and/or global level through inquiry			1	
	contribute to care for self, others, community, and world through individual or collaborative approaches			1	
	exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources			1	

	consider the changes in knowledge over time as tools and technologies have developed			1	
	evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled			1	
	analyze cause-and-effect relationships			1	
options:					
atomic and nuclear physics					1
modern physics					1
		Content	31.5	10	16

4.9 Computer Studies

Table A

Raw Data and Percentages for the Total Similarity of ABE Computer Studies: Intermediate Level and the MoE's Computer Studies 10

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	3	60	33	96
% of Total Categories	3%	63%	34%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE Computer Studies: Intermediate Level and the MoE's Computer Studies 10

	Similar	Not Present in ABE	Total
Total Category Count	3	60	63
% of Total Categories	5%	95%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE Computer Studies: Intermediate Level and the MoE's Computer Studies *10*

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Computers Intermediate	**Ministry of Education: Computer Studies 10**		**Similar**	**Not Present in ABE**	**Only in ABE**
Overarching Goals	**Big Ideas**				
	user needs and interests drive the design process.			1	
	social, ethical, and sustainability issues are influenced by design.			1	
	complex tasks require different technologies and tools at different stages.			1	
		Big Ideas	0	3	0
Goals	**Curricular Competencies**				
to introduce adult learners to the use of the computer as a tool so that they will become more self-confident and therefore able to function more efficiently with a computer.					1
	Applied Design			1	
	Understanding context			1	
	engage in a period of research and empathetic observation			1	
	Defining			1	

	identify potential users, societal impacts, and other relevant contextual factors for a chosen design opportunity			1	
	identify criteria for success, intended impact, and any constraints or possible unintended impacts			1	
	Ideating			1	
	screen ideas against criteria and constraints			1	
	critically analyze and prioritize competing factors to meet community needs for preferred futures			1	
	maintain an open mind about potentially viable ideas			1	
	Prototyping			1	
	identify and use sources of inspiration and information			1	
	choose a form for prototyping and develop a plan that includes key stages and resources			1	
	prototype, making changes to tools, materials, and procedures as needed			1	
	record iterations of prototyping			1	
	Testing			1	
	identify sources of feedback			1	
	develop an appropriate test of the prototype			1	
	conduct the test, collect and compile data, evaluate data, and decide on changes			1	

	iterate the prototype or abandon the design idea			1	
	Making			1	
	Identify and use appropriate tools, technologies, materials, and processes for production			1	
	Make a step-by-step plan for production and carry it out, making changes as needed			1	
	Sharing			1	
	decide on how and with whom to share product and processes			1	
	demonstrate the product to potential users, providing a rationale for the selected solution, modifications, and procedures			1	
	use appropriate terminology			1	
	critically reflect on their design thinking and processes, and identify new design goals			1	
	assess their ability to work effectively both as individuals and collaboratively in a group, including ability to share and maintain an efficient collaborative workspace			1	
	Applied Skills			1	
	demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments			1	
	identify the skills needed in relation to specific projects, and develop and refine them			1	
	Applied Technologies			1	

	choose, adapt, and if necessary learn more about appropriate tools and technologies to use for tasks			1	
	evaluate impacts, including unintended negative consequences, of choices made about technology use			1	
	evaluate the influences of land, natural resources, and culture on the development and use of tools and technologies			1	
		Goals	0	36	1
Required Learning Outcomes	**Curricular Competencies/Content**				
Keyboarding					1
use correct touch typing techniques and procedures					1
achieve an adjusted typing speed of 20 wpm					1
Introduction to Computers					1
demonstrate the ability to launch and terminate an application program					1
develop an appreciation of the evolution of computer technology and the range of applications in society	evolution of digital technology: for example, introduction of mobile devices, smartphones, tablets, Internet of Things		1		
describe commonly used computer terminology and acronyms	• computer hardware: for example, central processing unit (CPU), random-access memory (RAM), read-only memory (ROM), cache, hard drive, solid-state drive (SSD), motherboard, power supply, video card, sound card, printer, monitor, scanner, keyboard, mouse, speakers, flash memory, universal serial bus (USB) (2, 3, C), megahertz,		1		
describe the difference between hardware and software					1

	megabytes, gigabytes • software types: for example, systems software, utility software, application software				
demonstrate the use of the features of a mouse including left click, right click and scroll					1
demonstrate the ability to operate a printer (power on, put on line/off line and load paper)					1
Operating System					1
describe the basic operations of an Operating System (launching applications programs and managing system resources)					1
demonstrate the ability to correctly name and locate files and folders					1
demonstrate the ability to perform basic file operations using the operating system (copy, move, erase and rename)	command line operations: for example, establishing file structures, copying, deleting, moving files		1		
Word Processing					1
create a new word processing document					1
edit a document, including cutting and pasting text					1
print a document					1
save a document to a specified location					1
retrieve a document from a specified location					1
use tools such as a spell checker or thesaurus					1
format a page using basic page layout properties (margins, justification, boldfacing and line spacing)					1

demonstrate the ability to use help features and tutorials					1
create headers, footers and page numbering					1
manipulate margins					1
create tables, columns, page and section breaks					1
Electronic Communications					1
browse and search the Internet					1
send and receive email with file attachments					1
	business applications: software tools for communicating, presenting, organizing, and formatting data			1	
	operating system shortcuts: for example, cut, copy, paste, print, print window, print screen, screen refresh			1	
	preventive maintenance: for example, physical and cloud data backup solutions, digital security measures, software updates, patches			1	
	computer security risks: for example, malware, Trojans, viruses, phishing scams, identity fraud, ransomware			1	
	troubleshooting: identifying problem, establishing a theory of probable cause, testing theory to determine cause, taking action, testing and preventing, reporting			1	
	wired and wireless computer networking: for example, network cards, routers, switches, cables, modems, network types			1	

	risks and rewards: for example, data collection, personal information, privacy concerns, remote hacking, information as a commodity, personal safety, convenience, functionality			1	
	computational thinking: key components include decomposition, patterns and generalizations, abstraction, and algorithmic thinking			1	
	programming concepts and constructs: classes, objects, data types, constants and variables, expressions and instructions, order of operations, precedence of arithmetic operators, assignment and relational operators, decision and looping structures, Boolean operators, comparison operators, arithmetic operators			1	
	planning and writing:			1	
	—using visual problem-solving models			1	
	—using variables, expressions, and assignment statements to store and manipulate numbers and text in a program			1	
	—using decision structure for two or more choices			1	
	—effectively using looping structures			1	
	—distinguishing between syntax, logic, and run-time errors			1	

	impacts of computers and technology on society: global communication, social media, e-commerce, mobile payment solutions, globalization, human interactions, digital divide, crowdfunding, technology and social change, technology in humanitarian work, technology to assist people with diverse abilities			1	
	ethical considerations: may include big data use, equality of access, copyright and fair use, gender issues and technology, cyberbullying, white hat/black hat hacking, hacking for social causes, e-waste, recycling, conflict mineral exploitation			1	
	cultural appropriation: use of a cultural motif, theme, “voice”, image, knowledge, story, song, or drama, shared without permission or without appropriate context or in a way that may misrepresent the real experience of the people from whose culture it is drawn			1	
	environmental sustainability: e-waste, recycling and disposal, power consumption, renewable energy, server farms			1	
	digital literacy: curating a positive online portfolio, digital footprints/dossier, safe online information sharing, cyberbullying, online empathy, reporting online hate/bullying, support and resources, appropriate and professional ways to engage in online forums/communication spaces			1	

	health and wellness: for example, cyber addictions; ergonomic issues; and other risks and potential side-effects of overuse of digital tools, including games, gambling, and social media			1	
Options					
import information from other sources such as graphs, graphics, spreadsheets, databases and the Internet					1
perform basic spreadsheet and database operations					1
prepare and deliver a presentation using a computer					1
demonstrate the ability to participate in an online course					1
identify workspace ergonomics					1
Identify software maintenance issues (software updates and patches, deleting browser cache and history files, defragmenting hard drives, backing up important files, etc.					1
		Content	3	21	32

4.10 Education and Career Planning (EDCP)

Table A

Raw Data and Percentages for the Total Similarity of ABE EDCP and the MoE's Career-Life Education

	Similar	Not Present in ABE	Only in ABE	Total
Total Category Count	148	7	34	189
% of Total Categories	78%	4%	18%	100%

Table B

Raw Data and Percentages for the Curriculum Match of ABE EDCP and the MoE's Career-Life Education

	Similar	Not Present in ABE	Total
Total Category Count	148	7	155
% of Total Categories	95%	5%	100%

Table C

Raw Outcome-to-Outcome Comparison of ABE Education and Career Planning and the MoE's Career-Life Education

Legend:	
Italics	Optional Outcomes
	Outcomes not comparable

ABE: Education and Career Planning: Includes Career Planning, Portfolio, Student Success and Work Experience	**Ministry of Education: Career-Life Education**		**Similar**	**Not Present in ABE**	**Only in ABE**
Overarching Goals	**Big Ideas**				
		Big Ideas	0	0	0
Goals	**Big Ideas/Curricular Competencies**				
Career Planning					
to enhance the life and employment readiness skills of adult learners	•a sense of purpose and career-life balance support well-being. •finding balance between personal and work life promotes well-being.		1		
to pursue occupational and educational goals in a changing and diverse world.	career-life decisions influence and are influenced by internal and external factors, including local and global trends.		1		
Portfolio					

1. career portfolio –this type of portfolio can help take an inventory with a job-related goal. some examples include searching for a job, identifying new career options and choices, or recognizing a need or desire for further learning.	• explore and reflect on career-life roles, personal growth, and initial planning for preferred career-life pathways • develop preliminary profiles and flexible plans for career-life learning journeys		1		
OR					
2. subject-specific portfolio –this portfolio can help showcase strengths in a specific area of competency. some examples include photography, art, music, storytelling, parenting, addictions recovery, and cultural engagement. it can also help identify an area for continued learning.			1		
OR					
3. essential skills portfolio – this portfolio can help track skill strengths and identify further improvement in the area of reading, document use, writing, numeracy, oral communication, thinking, working with others, computer use, and continuous learning.			1		
to present and engage with faculty in the coordination and review of their work	• engaging in networks and reciprocal relationships can guide and broaden career-life awareness and options. • cultivating networks and reciprocal relationships can support and broaden career-life awareness and options. • apply a mentor's guidance in career-life exploration • mentorship opportunities: ongoing conversations focused on student needs, interests, and goals foster purposeful career-life development. The role of mentor is often performed by the career-life education educator.		1		
Student Success					

to develop the learning skills, study strategies and self awareness necessary for students to experience success as life-long learners.	• lifelong learning and active citizenship foster career-life opportunities for people and communities. • lifelong learning fosters career-life opportunities.		1		
Work Experience					
to provide students who already have a minimum of 270 hours of paid and/or volunteer work with a framework to recognize and reflect on the work experience.	•career-life development includes ongoing cycles of exploring, planning, reflecting, adapting, and deciding. •career-life choices are made in a recurring cycle of planning, reflecting, adapting, and deciding. • value of volunteerism for self and community		1		
to demonstrate knowledge of occupational health and safety, effective communication, and workplace ethics, as well as mastery of technical and applied skills, knowledge, and attitude for success in the workplace	• appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette • workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorksafeBC — BC employment standards — occupational health and safety rights and responsibilities — harassment prevention		1		
	• examine the influences of personal and public profiles on career-life opportunities			1	
	• identify risks and appreciate benefits associated with personal and public digital footprints			1	
		Goals	9	2	0
Required Learning Outcomes	**Curricular Competencies/Content**				
Career Planning					
1. Communication Skills					
identify and practice active listening skills in a variety of situations	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
demonstrate a knowledge of the range of effective speaking strategies	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • ways to represent themselves both personally and publicly		1		

extract, assess and exchange information using visual and electronic media	• methods of organizing and maintaining authentic career-life evidence including both digital and non-digital formats; for example, learning profile, portfolio, blog, anthology, archives, dossier, docket, journals, videos		1		
recognize diverse cultural styles of communication	• appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
identify and interpret non-verbal communication	• appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
develop and apply effective writing processes in a variety of contexts	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities • ways to represent themselves both personally and publicly		1		
develop self-awareness of personal qualities, values, interests and abilities	• practice effective strategies for healthy school/work/life balance • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		
apply critical thinking skills	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • models of decision making and innovative thinking for flexible planning and goal setting		1		
2. Education and Career Exploration Skills					
analyze current labour market and future trends	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism • local and global labour and market trends: for example, employment opportunities in many contexts, emerging opportunities, community needs, declining occupations, specialized training requirements		1		
investigate and develop a personal network	• consider the role of personal and employment networks in exploring career-life opportunities • ways to represent themselves both personally and publicly • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		

undertake occupational and educational research	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism • explore and reflect on career-life roles, personal growth, and initial planning for preferred career-life pathways		1		
identify available funding supports	•identify career-life challenges and opportunities, and generate and apply strategies • financial planning: for example, budgeting for post-graduation career-life options and entrepreneurship; considering influence on work-life balance decisions		1		
apply personal values, strengths, skills and interests to optional career paths	• factors that both inform career-life choices and are influenced by them, including personal, environmental, and land use factors • explore and reflect on career-life roles, personal growth, and initial planning for preferred career-life pathways		1		
recognize entrepreneurial options	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism		1		
investigate and utilize work-related community resources	• collaborate with supportive community members to explore the reciprocal influences of career-life choices • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks		1		
familiarize themselves with student support services	• identify career-life challenges and opportunities, and generate and apply strategies • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
use a fluid process of goal setting for educational and career planning	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism • models of decision making and innovative thinking for flexible planning and goal setting· Develop preliminary profiles and flexible plans for career-life learning journeys		1		
Additional Skills (complete 5 of 7)					
3. Study Skills					

recognize how personal learning style affects perception and processing information	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
develop strategies to effectively work in all learning styles	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
identify and practice active reading skills necessary to gather information					1
develop and apply effective note-taking strategies					1
identify strategies for effective time management	• practice effective strategies for healthy school/work/life balance		1		
identify and use a variety of memory techniques and strategies					1
perform tasks in word processing					1
describe student responsibilities in a college environment					1
increase their understanding of the value of life long learning					1
develop and apply effective test taking strategies					1
4. Personal Awareness Skills					
recognize that self-esteem is a life long process	• identify career-life challenges and opportunities, and generate and apply strategies • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		
recognize personal feelings and their influence	• strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		

employ strategies to deal with anger	• identify career-life challenges and opportunities, and generate and apply strategies • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • workplace safety: — injury prevention and safety protocols, such as WHIMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
assess and manage stress	• identify career-life challenges and opportunities, and generate and apply strategies • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		
analyze and utilize time management strategies	• practice effective strategies for healthy school/work/life balance		1		
explore and connect personal assumptions with behaviour	• self-assessment and reflection strategies • inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according to their gender, race, sexual orientation, diverse abilities		1		
clarify personal values and their impact on choices	• practice effective strategies for healthy school/work/life balance • self-assessment and reflection strategies		1		
create awareness of the spiritual, physical, intellectual and emotional dimensions of self	• strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		
5. Interpersonal Skills					

examine group process and practice the skills necessary for successful group experiences	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
review problem solving models and develop group decision making strategies	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • models of decision making and innovative thinking for flexible planning and goal setting		1		
research and use the various methods of conflict resolution and demonstrate their use	• Identify career-life challenges and opportunities, and generate and apply strategies • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
clarify the definition of assertiveness and implement successful techniques	• appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
analyze the reasons for bias and develop the ability to recognize it in everyday situations	• identify career-life challenges and opportunities, and generate and apply strategies • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
identify issues around all forms of prejudice and practice non-discrimatory interpersonal skills	• demonstrate inclusive, respectful, and safe interactions in diverse career-life environments • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural		1		

	influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • workplace safety: — injury prevention and safety protocols, such as WHIMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention • inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according to their gender, race, sexual orientation, diverse abilities				
investigate the various types of relationships and interaction they have with others	• appropriate workplace behaviour: including:— respectful interactions— work ethic— appropriate use of technology— workplace etiquette		1		
identify methods of developing positive relationships, including effective communication techniques	• demonstrate inclusive, respectful, and safe interactions in diverse career-life environments • inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according		1		

	to their gender, race, sexual orientation, diverse abilities				
examine the diversity of relationships and cultures in Canadian society	• demonstrate inclusive, respectful, and safe interactions in diverse career-life environments • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according to their gender, race, sexual orientation, diverse abilities		1		
6. Living Skills					
design and implement a personal budget	• practice effective strategies for healthy school/work/life balance • financial planning: for example, budgeting for post-graduation career-life options and entrepreneurship; considering influence on work-life balance decisions\		1		
formulate financial planning for the future			1		
investigate nutrition and impact on personal health	• practice effective strategies for healthy school/work/life balance		1		
assess personal wellness	• practice effective strategies for healthy school/work/life balance • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • self-assessment and reflection strategies		1		

investigate and utilize community resources	• collaborate with supportive community members to explore the reciprocal influences of career-life choices • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
strengthen personal support system and advocacy options	•apply a mentor's guidance in career-life exploration • ways to represent themselves both personally and publicly • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
examine the impact of lifestyles choices	• practice effective strategies for healthy school/work/life balance • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		
explore techniques for being an effective consumer	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
7. Job Search					
identify and plan the major steps of the job search process	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism • ways to represent themselves both personally and publicly • career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism		1		
develop effective interview strategies	• ways to represent themselves both personally and publicly • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks		1		

develop and maintain job search networks	• ways to represent themselves both personally and publicly • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks		1		
create effective resume and cover letter	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities • ways to represent themselves both personally and publicly • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks • develop preliminary profiles and flexible plans for career-life learning journeys		1		
8. Work/Training Experience					
gain exposure to a work or training situation					1
demonstrate appropriate work habits	• practice effective strategies for healthy school/work/life balance • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette • workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
gather information about vocational choices	• explore and reflect on career-life roles, personal growth, and initial planning for preferred career-life pathways		1		
demonstrate interpersonal skills with co workers and supervisors	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including:— respectful interactions— work ethic— appropriate use of technology— workplace etiquette		1		

identify work adjustment needs and strategies for success	• identify career-life challenges and opportunities, and generate and apply strategies • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
explore and/or participate in required industry training certificates	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
9. Career Management					
examine labour/union negotiation and human rights	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
review Labour Standards Act	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
investigate entrepreneurial options	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism • Explore and reflect on career-life roles, personal growth, and initial planning for preferred career-life pathways		1		
develop strategies preparing for career transition	• identify career-life challenges and opportunities, and generate and apply strategies • ways to represent themselves both personally and publicly • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks		1		

develop strategies and attitudes to maintain employment	• identify career-life challenges and opportunities, and generate and apply strategies • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
identify workplace ethic	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including:— respectful interactions— work ethic— appropriate use of technology— workplace etiquette		1		
Portfolio					
1. Purpose					
establish the goals and overall purpose of the portfolio	• ways to represent themselves both personally and publicly • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks • career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism • develop preliminary profiles and flexible plans for career-life learning journeys		1		
identify the intended audience of the portfolio			1		
choose type of portfolio			1		
2. Collection					
identify a variety of contexts where learning occurred i.e. education, training, employment, projects, community service, hobbies, accomplishments and activities	• explore and connect experiential learning both inside and outside of school with possible and preferred career-life pathways • develop preliminary profiles and flexible plans for career-life learning journeys		1		
gather and organize documents with significant learning experiences	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities • develop preliminary profiles and flexible plans for career-life learning journeys		1		
3. Reflection					

assess learning that resulted from these experiences	• explore and connect experiential learning both inside and outside of school with possible and preferred career-life pathways • self-assessment and reflection strategies • explore and reflect on career-life roles, personal growth, and initial planning for preferred career-life pathways		1		
identify and justify skills transferable to portfolio purpose	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities· • develop preliminary profiles and flexible plans for career-life learning journeys		1		
4. Evaluation					
emphasize strengths to be used toward portfolio	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities • develop preliminary profiles and flexible plans for career-life learning journeys		1		
reorganize skills by theme	• develop preliminary profiles and flexible plans for career-life learning journeys		1		
formulate portfolio skill themes			1		
5. Selection					
select items that best provide evidence of strengths and accomplishments toward portfolio purpose	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities • develop preliminary profiles and flexible plans for career-life learning journeys		1		
assemble portfolio	• methods of organizing and maintaining authentic career-life evidence including both digital and non-digital formats; for example, learning profile, portfolio, blog, anthology, archives, dossier, docket, journals, videos • develop preliminary profiles and flexible plans for career-life learning journeys		1		
6. Celebration					
celebrate completion of portfolio and share with others	• ways to represent themselves both personally and publicly		1		
describe transferable skills and strengths					1
present the portfolio	• ways to represent themselves both personally and publicly		1		
Student Success					
1. Adult Learner Awareness					

explore the challenges and advantages of adult learning	• identify career-life challenges and opportunities, and generate and apply strategies • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
appreciate the value of life-long learning	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
describe student responsibilities in a college/university environment					1
create awareness of the spiritual, physical, intellectual and emotional dimensions of self and how each of these are impacted by returning to school	• practice effective strategies for healthy school/work/life balance • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies • factors that both inform career-life choices and are influenced by them, including personal, environmental, and land use factors		1		
create awareness of impact on family, friends and coworkers by returning to school	• practice effective strategies for healthy school/work/life balance • factors that both inform career-life choices and are influenced by them, including personal, environmental, and land use factors		1		
identify personal supporters and recognize significance of their encouragement in pursuing goals	•apply a mentor's guidance in career-life exploration • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
investigate personal wellness (nutrition, fitness, stress, and habits) and recognize its impact on learning	• practice effective strategies for healthy school/work/life balance • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • self-assessment and reflection strategies		1		
2. Learning Challenges					
identify barriers to education (addictions, poverty, abuse, physical limitations, etc.)	• identify career-life challenges and opportunities, and generate and apply strategies • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		

recognize different learning disabilities and their impact on learners	• identify career-life challenges and opportunities, and generate and apply strategies • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
identify personal learning challenges	• identify career-life challenges and opportunities, and generate and apply strategies • self-assessment and reflection strategies		1		
express the importance of drawing on learners' strengths	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
examine different applicable strategies	• strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
3. Learning Styles					
recognize the properties of visual, auditory and kinesthetic learners	•preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
identify own learning styles	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
identify student strategies for each style	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		

recognize how personal learning style affects perception and processing information	• identify career-life challenges and opportunities, and generate and apply strategies • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives • self-assessment and reflection strategies		1		
4. Communication Skills					
demonstrate active listening	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
ask effective questions to facilitate understanding	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		

analyze the reasons for bias and develop the ability to recognize it in everyday situations	• inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according to their gender, race, sexual orientation, diverse abilities		1		

identify issues around all forms of prejudice and practice non-discriminatory interpersonal skills	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including:— respectful interactions— work ethic— appropriate use of technology— workplace etiquette • inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according to their gender, race, sexual orientation, diverse abilities		1		
examine the diversity of relationships and cultures in Canadian society and recognize diverse cultural styles of communication	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including:— respectful interactions— work ethic— appropriate use of technology— workplace etiquette • inclusive practices: acknowledging the value of diversity (e.g., First Nations, Métis, and Inuit worldviews, gender, race, sexual orientation, diverse abilities, religious beliefs, anti-sexist and anti-racist practices); Reconciliation as a responsibility for all individuals • different worldviews: particular philosophies of life or conceptions of the world that underpin identity and how people interact with the world; for example, First Peoples, new immigrant, refugee, rural, urban, colonial, geocentric; see https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/aboriginal-education/awp_moving_forward.pdf • diverse perspectives: attitudes of people according to their gender, race, sexual orientation, diverse abilities		1		

identify and interpret non-verbal communication	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
review writing process					1
5. Study Skills					
develop critical reading skills (e.g. SQ3R, KWL)	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
navigate textbooks by recognizing and emphasizing key concepts, highlighted sections, chapter summaries, glossaries and indexes					1
utilize a variety of different memory techniques and strategies and apply them to meaningful content (e.g. flashcards, mnemonics, self-testing)					1
create a learning environment conducive to effective study.	• identify career-life challenges and opportunities, and generate and apply strategies		1		
practice the skills necessary for successful group study experiences.	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
apply effective note taking strategies from listening (e.g.: classroom lecture & workshops, media sources)					1
apply effective note taking strategies from print (e.g.: textbooks, articles)					1
implement solid study habits (e.g.; reviewing, recording, rewriting, summarizing, study partners use of glossary & index, etc.)					1
6. Test Taking					
identify sources and effects of test anxiety	• identify career-life challenges and opportunities, and generate and apply strategies		1		

use effective strategies to manage test anxiety			1		
actively use study techniques to prepare for tests throughout the term (ongoing cumulative review)	• practice effective strategies for healthy school/work/life balance		1		
use effective study techniques prior to a test					1
use effective strategies during a test (e.g.: pre-reading test questions, jotting down key things from memory at beginning of test, using weight of question to determine depth of answer required, use of required formulas, using time effectively during a timed test, tips on answering questions)					1
7. Time Management					1
identify and apply strategies for effective time management	• identify career-life challenges and opportunities, and generate and apply strategies • models of decision making and innovative thinking for flexible planning and goal setting		1		
identify different scheduling tools and evaluate which ones will work for learners' personal needs	• practice effective strategies for healthy school/work/life balance • preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
demonstrate the ability to set long and short term goals	• identify career-life challenges and opportunities, and generate and apply strategies • self-assessment and reflection strategies • models of decision making and innovative thinking for flexible planning and goal setting • develop preliminary profiles and flexible plans for career-life learning journeys		1		
create personal schedules including study times, assignments, tests and personal obligations	• practice effective strategies for healthy school/work/life balance		1		
8. Research					

find information and research topics using various sources	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism		1		
compile, evaluate and review information	• methods of organizing and maintaining authentic career-life evidence including both digital and non-digital formats; for example, learning profile, portfolio, blog, anthology, archives, dossier, docket, journals, videos		1		
identify plagiarism					1
reference their sources appropriately understanding the different referencing styles (MLA, APA)					1
9. Support and Resources					
familiarize themselves with student support services including financial aid officers, education advisors, learning disability coordinators, learning specialists, employment services etc.	• identify career-life challenges and opportunities, and generate and apply strategies • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
familiarize themselves with course supports available within the institution including writing labs, tutorials, instructor office hours etc.			1		
identify and access personal support systems	• identify career-life challenges and opportunities, and generate and apply strategies • strategies for maintaining well-being: for example, stress management, mindfulness practices, awareness of digital presence/footprint and how it can influence self-esteem and anxiety • personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers		1		
10. Technology Skills					
perform tasks in word processing					1
use spelling and grammar checks					1
research information on the internet	• career-life development research: related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism		1		

access and utilize library services					1
use electronic communication (emails, social networks, college email, student portals)	• appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette • employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks		1		
create and use folders for organizing course work (e.g. storage on student drives, USB memory and cloud services)					1
bookmark useful references					1
Optional Learning Outcomes:					
1. Online Learning					
compare the pros and cons of online learning	• preferred ways of knowing and learning: recognizing what works for self and what works for others may be different; awareness of cultural influences, including traditional and contemporary First Peoples worldviews and cross-cultural perspectives		1		
evaluate if online learning is a good personal option.	• identify career-life challenges and opportunities, and generate and apply strategies		1		
identify important strategies for online success			1		
explore at least one online learning platform (e.g.: Moodle, Blackboard)					`
2. Presentation Skills					
recognize and practice using factors that affect physical presence (eye contact, face audience, body language)	• ways to represent themselves both personally and publicly		1		
practice speaking skills including projection, speed, tone, clarity and enthusiasm			1		
use humor and practical examples to engage audience					1
use a variety of visual back up in their presentations (e.g.: handouts, props, posters, power point presentation)					1

promote discussion & questions from the audience					1
3. Financial Aid & Funding Options					
develop a personal budget for the duration of school program	• financial planning: for example, budgeting for post-graduation career-life options and entrepreneurship; considering influence on work-life balance decisions		1		
identify available funding supports including student loans, bursaries, grants, scholarships, aboriginal funding etc.	•personal networking: accessing support networks to continue exploring career-life opportunities; for example, family, school, community, peers • financial planning: for example, budgeting for post-graduation career-life options and entrepreneurship; considering influence on work-life balance decisions		1		
analyze criteria for eligibility and recognize personal accomplishments (e.g identify all community service & volunteer work, awards, affiliations.)	• value of volunteerism for self and community		1		
create a personal list of suitable funding sources	• financial planning: for example, budgeting for post-graduation career-life options and entrepreneurship; considering influence on work-life balance decisions		1		
4. BC Transfer Process					
Understand the BC transfer process.					1
examine labour/union negotiation and human rights	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
review Labour Standards Act	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
investigate entrepreneurial options	• career-life development research related to diverse career-life roles; for example, post-graduation options, personal passions, work, family, education, volunteerism		1		

develop strategies preparing for career transition	• identify career-life challenges and opportunities, and generate and apply strategies· employment marketing: for example, resumé, cover letter, cold calls, social media, interviews, application forms, accessing employment networks		1		
identify rights and responsibilities for employees and employers	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention		1		
develop strategies and attitudes to maintain employment	• identify career-life challenges and opportunities, and generate and apply strategies • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
identify workplace ethics	• appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
Work Experience					
1. Occupational Health and Safety	• workplace safety: — injury prevention and safety protocols, such as WHMIS, PPE, safety training, WorkSafeBC — BC Employment Standards — occupational health and safety rights and responsibilities — harassment prevention				
apply hazard recognition and injury prevention skills			1		
demonstrate knowledge and practice of basic workplace incident and accident response procedures and protocols			1		
demonstrate knowledge and practice of Worksafe BC's workplace health and safety rights and responsibilities			1		
analyze hazards or potential hazards in an occupation or industry sector related to a work experience placement (e.g. restaurant industry, construction industry)			1		
demonstrate knowledge of workplace harassment and discrimination prevention policies			1		

2. Workplace Application					
self-identify and describe the type of work done while on work experience					1
demonstrate use of employability skills* while on work experience *Employability Skills as defined by the Conference Board of Canada	• competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
exemplify a positive work ethic and meet performance standards of the workplace			1		
act upon a workplace problem	• identify career-life challenges and opportunities, and generate and apply strategies		1		
express and defend transferable skills acquired from school courses, community participation or workplace experience (ex. accounting, applied math, carpentry, mechanics, video production, cooking, writing, computer skills, presentation skills)	• communicate with the intent to highlight personal strengths, talents, accomplishments, and abilities • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills		1		
3. Work Training and Experience					
demonstrate appropriate work habits	• demonstrate inclusive, respectful, and safe interactions in diverse career-life environments • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
gain exposure to work or training situations					1
gather information about vocational choices					1

demonstrate interpersonal skills with coworkers and supervisors	• demonstrate inclusive, respectful, and safe interactions in diverse career-life environments • competencies of the educated citizen, employability skills, essential skills, leadership and collaboration skills • appropriate workplace behaviour: including: — respectful interactions — work ethic — appropriate use of technology — workplace etiquette		1		
explore and/or participate in required industry training certificates					1
	• ways to contribute to community and society that take cultural influences into consideration			1	
	• environmental: for example, climate change, impact on ecology, sustainability, stewardship			1	
	• land use: respectful consideration of First Peoples claims and rights, places of historical and social significance, legal considerations. The connection between people and place is foundational to First Peoples perspectives on the world.			1	
	• cultural influences: on the nature of an individual's contributions, roles, values, duties			1	
	• pre- and post-graduation opportunities: such as extracurricular activities, volunteerism, travel, passion projects; includes course and program selection related to post-graduation plans			1	
		Content	139	5	34