School District/Independent School Authority Name: Kootenay Lake	School District/Independent School Authority Number (e.g. SD43, Authority #432): No. 8
Developed by: Provincial Resource Centre for the Visually Impaired (PRCVI) in collaboration with BC Teachers of Students with Visual Impairments	Date Developed: May 2021
School Name: LV Rogers Secondary School	Principal's Name: Dan Rude
Superintendent Approval Date (for School Districts only):	Superintendent Signature (for School Districts only):
Board/Authority Approval Date:	Board/Authority Chair Signature:
Course Name: Expanded Core Curriculum – Braille 11 (ECC-VI-BRL)	Grade Level of Course: 11
Number of Course Credits: 4	Number of Hours of Instruction: 120

Board/Authority Prerequisite(s):

None.

Special Training, Facilities or Equipment Required:

This course requires a qualified teacher of students with visual impairments who is proficient in braille and access technologies. The students are taught using direct instruction on an individual basis (one-on-one) as there is usually only one student with a visual impairment in each school. Braille is scheduled as one of the electives and the teacher of students with visual impairments meets with the student during the appointed block.

Course Synopsis:

Students will be introduced to the foundations of Unified English Braille (UEB) and continue to develop proficiency in reading and producing braille with a variety of low- and high-tech devices. Students will also have opportunities to reflect on their learning by critically examining the uses of braille in their daily lives. They will explore curriculum themes, develop projects, and research topics of personal interest. Finally, students will begin to foster connections with peers and mentors who are proficient braille readers.

Goals and Rationale:

This course has been developed so that students who are blind or visually impaired continue to develop competencies in braille reading and writing. It will provide students with skills that will allow them to continue to access and enjoy a variety of literacy materials in an efficient reading medium.

There are several possible motivations for students to learn braille reading and writing skills in Grade 11. Students may use braille as their primary or secondary literacy medium for accessing learning materials in their coursework. They may also acquire braille reading and writing skills in advance of post-secondary education, entry into the workforce, or to access community-based activities and programs.

Across curricular areas, braille remains one of the most effective and pedagogically sound formats for non-visual access to learning content. This course continues the student's journey to becoming proficient in braille reading and writing within their secondary school career and beyond.

Indigenous Worldviews and Perspectives:

The course touches upon deeper issues and understandings that align with several First Peoples Principles of Learning.

1) Learning is embedded in memory, history, and story.

By learning the braille code, the student is part of a proud tradition of individuals with visual impairments gaining independent access to the written word, which dates back over two centuries. Course content emphasizes a historical study of braille as well as an examination of the role of braille in contemporary life. This content enables the student to feel better connected to the story of braille, the impact braille has had on the world, and the impact it can have in their own lives.

2) Learning requires exploration of one's identity.

For a learner to acquire the braille code at the secondary school level, it is likely that the student has experienced a significant change to their sensory profile that now requires non-visual access to learning materials. Learning the braille code does not happen in isolation from the socioemotional implications that vision loss can have for young people. This course emphasizes a grounded approach to learning braille by examining how braille is represented in our society and provides learners with the information and perspective needed to speak to their families and peers with confidence about the importance of braille. The course also emphasizes the importance of experienced mentors who read braille – not only to provide technical support but to also provide learners with a positive model.

3) Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.

One of the key features of ECC-VI-BRL 11 is that the course is taught by a qualified teacher of students with visual impairments. Knowledge and fluency in the use and instruction of the braille code requires intense study and practice. In this way, the content of the course is shared only in the context of the relationship between the learner and the qualified teacher of students with visual impairments.

BIG IDEAS

Braille reading and writing are essential skills for students requiring non-visual access to learning materials.	Braille reading and writing take place in social, cultural and historical contexts and are connected to feelings and attitudes toward visual impairment and its impact on the individual.	Learners can use multiple sensory modalities (vision, hearing, touch) to gather information in the learning environment.	Technology for braille reading and writing is vital to the learner's ability to access and analyze information at home, school, in the community, and in the workplace.	Connections to the braille-reading community contextualize and enrich braille usage for the individual learner

Learning Standards

Curricular Competencies	Content
Students are expected to do the following:	*Students are expected to know the following:*
Problem Solving and Critical Thinking • Students will engage in problem solving when applying rules of UEB and braille formats to their reading and writing. • Students will use critical thinking and analysis to determine which braille writing/production tool or device best meets their needs when completing a range of writing tasks. • Students will determine which advocacy techniques are available for articulating their accessible alternate format requirements at school and in the community. Comprehend and Connect (Reading, Writing, Drawing) • Students will continue to work through a sequential process to learn the UEB code and rules. • Students will use systematic tactile strategies to explore and interpret tactile graphics, diagrams, and drawings. • Students will explore various methods and materials to create tactile drawings and diagrams. Reflect and Project • Students will reflect on the role of braille in their own learning process	Unified English Braille (UEB) Code Knowledge • Signs, symbols, and basic usage rules including expanded knowledge of UEB math/technical symbols and rules. • Formatting rules and guidelines. Braille Technology • Use of low tech, manual braille production. • Use of higher tech digital file access with refreshable braille display. Social and Historical Contexts of Braille • Knowledge of the story of Louis Braille and how the code has developed over the last two centuries. • The implications of braille to early advances in education for learners with visual impairments. • Continued exploration of braille in our world. • Looking ahead to new developments and trends. Personal Connections

and will critically examine how braille reading and writing will factor into their projected (future) plans. • Students will reflect on new technological developments in braille reading and writing in a socio-historical context. • Students will continue to expand their usage of UEB beyond academic tasks by connecting with mentors and peers who read braille, and by exploring options for using braille in leisure activities.	• Understand how braille fits into a "toolkit" for accessing information. • Understand how braille reading and writing will factor into future plans (e.g., post-secondary education, workplace). • Understanding how to advocate for accessible format needs at the school and community levels.

Big Ideas – Elaborations

1) Braille reading and writing are essential skills for students requiring non-visual access to learning materials.
   a. Despite the proliferation of text-to-speech options available for accessing texts in digital format, braille remains the most pedagogically sound means of providing access to learning materials for students who require non-visual access to learn along with their typically sighted peers.
2) Braille reading and writing take place in social, cultural and historical contexts and are connected to feelings and attitudes toward visual impairment and its impact on the individual.
   a. When braille is acquired as a new literacy medium at the secondary level, it is often in response to a change in the student's level of functional vision. As a result, there are a number of socio-emotional considerations that enter into braille instruction at the secondary level. Teachers of students with visual impairments must address socio-emotional considerations in tandem with braille code acquisition.
3) Learners can use multiple sensory modalities (vision, hearing, touch) to gather information in the learning environment.
   a. Braille reading and writing requires the learner to use the sense of touch to gather rich information and to use other senses in coordination to access learning opportunities and curricular content. In learning to read and write in braille, tactile input takes on special significance for non-visual access as compared with the role of tactile input for visual access to learning content.
4) Technology for braille reading and writing is vital to the learner's ability to access and analyze information at home, school, in the community, and in the workplace.
   a. Technology to support braille reading and writing is essential for efficient and effective access across a variety of settings. Developments in braille technology have greatly increased the breadth and depth of access to literacy materials for learners with visual impairments. In today's world, braille usage and technology are increasingly inextricable.
5) Connections to the braille-reading community contextualize and enrich braille usage for the individual learner.
   a. Many students will be the only student in his or her school or community who reads and writes in braille. Therefore, it is critical that braille-reading students be connected to their peers who read braille as well as more experienced mentors. Community connections provide motivation, support, and connect the learner to a broader reality where braille is an inextricable part of everyday living.

Curricular Competencies – Elaborations

Problem Solving and Critical Thinking

- Determine locations and instances where braille could be used in everyday life and suggest other uses to improve accessibility.
- Understand and articulate the differences between the variety of braille technologies available on the market.
- Use a variety of low- and high-tech devices for reading and writing braille.
- Create different types of simple tactile diagrams to represent information.
- Analyze own work to identify and correct errors.

- Assess own reading and writing skills and determine areas for improvement or skill development.
- Build strategies for accessing printed information in a medium is compatible with accessibility needs.

Comprehend and Connect (Reading, Writing, Drawing)

- Build increasing speed and accuracy in braille reading and writing.
- Locate and read a variety of braille materials.
- Become familiar with formatting rules in a variety of braille materials.
- Develop skills for efficiently skimming and scanning braille materials.
- Create braille documents that can be back-translated to print accurately.
- Understand and apply word processing concepts (e.g., styles, link text).

- Develop strategies for to effectively create, organize, and implement writing projects using braille.

Reflect and Project

- Self-reflect on the learning process and the role of braille and braille technology.
- Incorporate braille into their school, home, and community activities.
- Continue to assess the influences of braille reading on their own literacy development and access to learning.
- Assume greater independence in researching braille technology and assessing the goodness of fit between this technology and current and future needs.
- Use braille technology to communicate with a mentor who uses braille.
- Use braille technology to communicate with peers who also read braille (i.e., as pen pals).
- Begin to examine, promote, and advocate for enhancing braille awareness and sharing of braille writing in the school and in the larger community.

Content – Elaborations

Unified English Braille (UEB) Code Knowledge
- Signs/notation and usage rules.
  - Continued introduction of braille contractions, punctuation, and indicators as well as code rules through a systematic program of braille instruction.
- Formatting rules and guidelines.
  - Continued development of skills in braille formats for increasingly complex learning materials at the secondary level (e.g., textbooks).

Content – Elaborations

- o Awareness of different braille codes and systems (e.g., braille ASCII, foreign language codes, music code) and research on resources that would assist in learning specialized codes or symbols (e.g., online resources, user manual for braille technologies).
- o Continued exploration in techniques used for creating more complex tactile images, diagrams, and graphs.

Braille Technology
- •Low tech, manual braille production.
  - o Developing proficiency in the use of the manual Perkins braillewriter.
  - o Awareness of the slate and stylus and handheld braille labellers.
  - o Basic knowledge and use of braille learning tools (e.g., braille rulers, models with braille labels).
- •Higher tech digital file access/production with refreshable braille display.
  - o Exposure to the use of refreshable braille and the various ways in which it can be used (e.g., standalone notetaking device, braille display paired with computer or mobile device).
  - o Exposure to other braille technologies (e.g., braille embosser, braille translation programs) and knowledge of scenarios in which they are used.

Social and Historical Contexts of Braille
- •The story of Louis Braille and how the code has developed over the last two centuries.
  - o Reading and discussing documents that examine the establishment of braille as the tactile reading medium worldwide (e.g., the "War of the Dots").
  - o Discussion and exploration of the development of braille codes around the world as well as specialized codes used internationally (e.g., music braille code).
  - o The rationale for the adoption of UEB in Canada and around the world and awareness of braille authorities (e.g., Braille Literacy Canada, the International Council on English Braille).
- •The implications of braille to early advances in education for learners with visual impairments.
  - o Reading and discussion of biographies that demonstrate the impact of braille in the lives of braille readers.
  - o Continued exploration and discussion of to the limitations on the availability of braille and inclusive access for individuals with visual impairments as content for discussions on social justice and accessibility.
- •Continued exploration of braille in our world.
  - o Explore texts and online content (e.g., blogs, videos) to learn about how braille is produced around the world.
  - o Examine global, national, regional, and local issues facing individuals with visual impairments in accessing braille.
  - o Begin to formulate potential solutions to these issues.
- •Looking ahead to new developments and trends.
  - o Discuss and develop strategies for keeping up-to-date with developments in new braille technology and major code changes.
  - o Research the latest prototypes and speculative developments in braille technology and evaluate the prospective advantages and disadvantages to each.
  - o Social justice and accessibility discussions (e.g., steps to address discrimination facing braille readers in Canada and/or abroad).

Personal Connections
- •Begin to understand how braille fits into a "toolkit" for accessing information.

- o Continue to develop knowledge, skills, and experience to determine the combinations of accessible formats that maximize comprehension and efficiency.
- •Understand how braille reading and writing will factor into plans for the future (e.g., postsecondary education, workplace).
  - o Develop strategies to independently access print materials (e.g., OCR software, accessible library services) and independently produce print materials (e.g., essays back-translated from a braille notetaker).
- •Understand strategies for advocating independently for accessible format needs at the school and community levels.
  - o Continued practice in articulating arguments that support the provision of accessible alternate format materials (e.g., presentations to teachers or community groups).

Recommended Instructional Components:

Unit 1: Exploration

Students will explore the history of braille and its development. They will begin to learn the braille code and consider ways in which braille could be used throughout their daily life.

Unit 2: Tactile Discrimination/Interpretation

Students will learn how to discriminate the different textures, lines, and characters used in tactile graphs, charts, and diagrams. They will begin to analyze information that is presented in a tactile format as well as create their own simple tactile graphics. Students will learn how to interpret tactile information in a format that they understand and relate to others.

Unit 3: Production

Students will develop braille writing and production skills using low- and high-tech devices. Students will be able to use the braillewriter to begin to produce material using the braille code.

Unit 4: Braille Reading

In this unit, students will continue to master their knowledge of the braille code. Students will also focus on increasing their speed and accuracy in braille reading.

Unit 5: Braille Writing

In this unit, students will produce braille with a high degree of accuracy. They will use braille to produce a variety of materials for leisure and school activities, including the use of technology for production.

Unit 6: Social/Emotional Components of Braille Reading/Writing

In this final unit, students will connect with other braille users, peer and adult mentors, and reflect on their own experiences learning and using braille.

Recommended Assessment Components:

Ensure alignment with the Principles of Quality Assessment

Type of Assessment	Category	Details	Weighting (%)
Formative	Practical applications	Teacher-created assignments	40%
	Teacher rating scale	End of Units 1-6	40%
Summative	Final assessment	Reading	10%
		Writing	10%
		Total:	100%

- Eighty per cent (80%) of the grade will be based on evaluations conducted throughout the course. This portion of the grade will reflect the students' most consistent level of achievement throughout the course, although special consideration will be given to the more recent evidence of achievement. Twenty per cent (20%) of the grade will be based on a final evaluation of knowledge of UEB and other braille codes.

Performance Methods

- Braille code knowledge
- Projects
- Portfolio/binders/computer files
- Braille products evaluation
- Presentation of completed works
- Maintaining assignments on note taker

Personal Communication

- Student/instructor/mentor dialogue
- Logbook reflection
- Self-evaluation
- Teacher evaluation

Other

- Weekly assessment
- Teacher anecdotal records
- Teacher log
- Checklists
- Rubrics
- Rating scales

Learning Resources:

Farrenkopf, C. (2015). Assessment of Braille Literacy Skills: UEB and EBAE. (3rd Ed.). Houston, TX: Region 4 Education Service Center.

Holbrook, M. C. & D'Andrea, F. M. (2014). Ashcroft's Programmed Instruction: Unified English Braille. Germantown, TN: SCALARS Publishing.

International Council on English Braille (2014). Guidelines for Technical Material. Retrieved from
http://www.iceb.org/guidelines_for_technical_material_2014.pdf

International Council on English Braille (2013). Rules of Unified English Braille. (2nd Ed.). Retrieved from
http://www.iceb.org/Rules%20of%20Unified%20English%20Braille%202013.pdf

Wormsley, D. P. (2016). I-M-ABLE: Individualized Meaning-Centered Approach to Braille Literacy Education. Louisville, KY: American Foundation for the Blind.

Additional Information: