

Writing Strategies for Students  
with Visual Impairments:  
**A Classroom Teacher's Guide**



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### **Acknowledgments**

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### **About SET-BC**

Special Education Technology - British Columbia (SET-BC) is a provincial government initiative established to assist school districts and group 1 and 2 independent schools in educating students with physical disabilities, visual impairments or autism through the use of technology.

SET-BC's mandate is:

- to lend assistive technologies to facilitate students' access to educational programs, and
- to assist school districts in providing the necessary consultation and training for students and educators in the use of these technologies.

SET-BC services to school districts include:

- consultation, planning and follow-up for school based teams
- loan and maintenance of assistive technology
- training
- provision of resources and information

SET-BC consultants are based in seven Regional Centres around the province, providing community based services to all BC school districts. Each district has a SET-BC District Partner who can provide information on how services are provided for eligible students. For more information and resources on assistive technology, check SET-BC's web site at [www.setbc.org](http://www.setbc.org).

#### **The SET-BC Regional Centres**

- Region One - Victoria
- Region Two - Vancouver
- Region Three - Vernon
- Region Four - Kimberley
- Region Five - Prince George
- Region Six - Prince Rupert
- Region Seven - Dawson Creek



# Table of Contents

<b>Introduction.....</b>	<b>1</b>
Environmental Considerations .....	2
Student Considerations.....	2
Writing Strategy Checklist.....	3
<b>Section 1: Paper Strategies .....</b>	<b>4</b>
Provide Regular Writing Tools .....	5
Adapted Writing Tool.....	6
Adapted Paper .....	7
Writing with Video Magnification .....	8
Writing with the Manual Brailler.....	9
Slate and Stylus .....	10
<b>Section 2: E-text Strategies .....</b>	<b>11</b>
Word Processing Software.....	12
Word Processing Software with Speech.....	13
Word Processing with Screen Magnification Software .....	14
Word Processing with Speech and Screen Magnification Software .....	15
Electronic Brailler .....	16
Braille Notetaker.....	17
Word Processing Software with Refreshable Braille.....	18
Word Processing with Speech and Refreshable Braille.....	19
<b>Section 3: Oral Strategies.....</b>	<b>20</b>
Dictation .....	21
<b>Section 4: Electronic Text Output.....</b>	<b>22</b>
Laser and Inkjet Printers .....	23
Braille Embosser .....	24

## Introduction

This document is intended as a resource to provide classroom teachers with a selection of strategies to address the writing needs of students with visual impairments. It must be emphasized that a student's visual impairment and its impact will be unique. For example, two students with the same diagnosis and visual acuity may function differently in the classroom. The following is generalized information, and the needs of the students may be more specific. It is important to consult with your district Vision Resource Teacher to help interpret the functional vision assessment regarding the student's functional vision in the classroom.

The document is divided into 4 sections based on the types of media that students use to complete reading tasks.

**The 4 sections are:**

- Paper Strategies which include: regular writing tools, adapted writing tools, adapted paper, writing with video magnification, writing with a manual brailler, and use of a slate and stylus.
- E-Text Strategies which include: word processing software, word processing software with screen magnification, word processing with speech, word processing with screen magnification and speech, use of an electronic brailler, use of a braille note taker and word processing with refreshable braille
- Oral Strategies which include using a dictation device.
- Electronic Text Outputs which include: laser and inkjet printers and use of a braille embosser.

**How to use this document:**

1. Start with the needs of the student.
2. With the help of the Vision Resource Teacher identify the student's visual functioning as it relates to writing in the classroom environment.
3. Select from the strategies contained in this document that best address the student's needs using the Writing Strategy Checklist.
4. In consultation with the Vision Resource Teacher implement the identified strategies.

## Environmental Considerations

It is important to take into consideration the environmental factors that influence the student's functional vision within the classroom environment. These issues may be addressed with the student's Vision Resource Teacher to ensure success with writing tasks.

These include:

- adapted workspace (e.g. separate work station, larger desk or L-shape desk)
- storage space for large print or paper braille materials
- ergonomics (e.g. positioning and seating)
- presentation of materials (e.g. slant boards, masking, colour overlays)
- lighting (e.g. glare, too much light, not enough light, type of lighting)
- sound (e.g. speech from computer or braille notetaker, noise from braille embosser, noise in the classroom such as fans, open doors)
- student positioning (e.g. preferential seating, 2 work stations, lighting source)
- power source: (e.g. available power source, surge protection, batteries charged, extra batteries)
- portability (e.g. equipment mounted on cart, accessibility within school, weight of equipment and other classroom materials)
- peripherals (e.g. headphones, access to printer/embosser)
- safety issues in the classroom (e.g. cords, placement of furniture and equipment)

## Student Considerations

- level of self-esteem and self-advocacy
- ability and willingness to use technology
- ability to manage equipment and mobility skills
- self awareness of needs
- awareness of fatigue and frustration levels

## Writing Strategy Checklist

Strategy	Page	Doesn't need or can't use	Uses successfully	Try this strategy	Comments
<b>PAPER</b>					
REGULAR WRITING TOOLS					
ADAPTED WRITING TOOLS					
ADAPTED PAPER					
WRITING WITH VDEIO MAGNIFICATION					
WRITING WITH THE MANUAL BRAILLER					
SLATE AND STYLUS					
<b>E-TEXT</b>					
WORD PROCESSING SOFTWARE					
WORD PROCESSING SOFTWARE WITH SPEECH					
WORD PROCESSING WITH SCREEN MAGNIFICATION SOFTWARE					
WORD PROCESSING WITH SCREEN MAGNIFICATION SOFTWARE AND SPEECH					
ELECTRONIC BRAILLER					
BRAILLE NOTETAKER					
WORD PROCESSING SOFTWARE WITH REFRESHABLE BRAILLE					
WORD PROCESSING SOFTWARE WITH REFRESHABLE BRAILLE AND SPEECH					
<b>ORAL</b>					
DICTATION					
ELECTRONIC TEXT OUTPUT					
LASER AND INKJET PRINTER					
BRAILLE EMBOSSE					

## **Section 1: Paper Strategies**

## Provide Regular Writing Tools



Regular writing tools are writing implements without adaptations.

A student who would use regular writing implements is one with normal or near normal acuity.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Availability</li><li>• No special preparation</li><li>• Use of same writing materials as sighted peers</li></ul>	<ul style="list-style-type: none"><li>• Student who is blind or has low vision may not be able to use regular writing tools</li></ul>

### Best Practices and Considerations:

- Teachers should request a functional vision assessment from a qualified vision teacher to determine whether a student needs adapted writing tools.
- A student may try to use regular writing tools when he or she should be using adapted writing tools. These students may need to be monitored for fatigue, stress, frustration, and/or reduced performance.
- Teachers should be aware of seating and lighting considerations (glare).

## Adapted Writing Tool



Adapted writing tools are specialized implements to produce legible written output.

A student who may use these materials is one with low vision who has difficulty producing handwritten work using regular writing tools.

For example, felt tip pens and soft lead pencils.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Commercially available</li><li>• Portability</li><li>• Adapted pens/pencils produces legible writing</li><li>• Similar to tools used by classmates</li></ul>	<ul style="list-style-type: none"><li>• May look different</li><li>• Easily lost</li><li>• Need to have good source of tools</li></ul>

### Best Practices and Considerations:

- Assessment and recommendations for adapted writing tools should be done through a low vision clinic or vision resource teacher.
- Different types of adapted writing tools should be considered for different tasks, e.g. portability.
- Student may need some instruction in writing task. (i.e. margins, whether they want to skip a line)
- Students with fluctuating vision should use their adapted writing tools throughout the day.
- The writing tools are kept in good working order and readily available to the student.

## Adapted Paper



Adapted paper provides additional visual and or tactile feedback for writing tasks..

A student who may use these materials is one with low vision who requires support in seeing lines.

Examples include dark line paper, braille paper, coloured paper raised line paper, and signature guides.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Reduces fatigue and frustration</li><li>• Reduces time required to finish tasks</li><li>• Portable</li><li>• Provincial Resource Centre for the Visually Impaired (PRCVI) provides BC students with some adapted paper</li></ul>	<ul style="list-style-type: none"><li>• Need for storage space</li><li>• Availability</li><li>• Consumable</li><li>• Dots fade away (Braille Paper)</li><li>• Can be expensive</li></ul>

### Best Practices and Considerations:

- Consider purchasing larger format binders or file folders for oversized copies.
- Students needs large amount of storage space for their materials.
- Students may require additional assistance in organizing oversized materials.

## Writing with Video Magnification



A video magnifier is a system that uses a video camera to project a magnified image of printed text or handwriting onto a video monitor or TV screen.

A student who would use a video magnifier has difficulty writing without magnification.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Instant visual access when writing</li><li>• Adjustable magnification</li><li>• Different colour and contrast options</li><li>• Masking and underlining options</li><li>• Use same print materials as their peers</li><li>• Independence in writing task</li></ul>	<ul style="list-style-type: none"><li>• The larger the magnification the smaller the viewing area</li><li>• Students may have difficulty locating where they need to start writing</li><li>• Requires large desk space or separate workstation</li><li>• Can physically isolate the student from his/her peers</li></ul>

### Best Practices and Considerations:

- Student should be involved in the selection of the video magnification device.
- Students should start with a higher magnification than they would require while learning to use the device. Once they have mastered the use of the device, the magnification should be reduced to the minimum setting to increase the amount of text displayed.
- Student should use Variable magnification according to the task and level of eye fatigue
- Hand writing tasks can be displayed on either a monitor or a computer screen.
- Student requires training and good eye-hand coordination when writing on a X/Y table.
- Navigation and place finding on a page may be an issue when using analog devices; digital devices reformat the page.
- OT should be involved in positioning to reduce neck strain and maintain posture.
- Student must be able to easily reach and use the controls.
- Video magnification devices required in multiple locations need planning for transportation and storage.

## Writing with the Manual Brailler



A manual brailler is a 6 key entry device that produces braille on paper.

A student who uses a manual brailler has a significant visual impairment and requires braille as a writing medium.

A manual brailler is typically used for emergent Braille learners, as a backup for electronic devices and for writing math and science notation.

The most common manual brailler is the Perkins brailler.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Instant production of braille</li><li>• Portable</li><li>• Durable</li><li>• Simple to operate</li></ul>	<ul style="list-style-type: none"><li>• Paper braille requires large storage areas</li><li>• Braille dots may flatten over time because of usage and improper storage</li><li>• Noise</li><li>• Devices can be heavy</li><li>• Teacher or teaching assistant requires knowledge of Braille code to monitor writing process</li><li>• Editing is difficult on a manual brailler</li></ul>

### Best Practices and Considerations:

- Can isolate student who needs separate work station.
- Student should be encouraged to double space their work to leave room for print to be transcribed above the braille by the braillist or vision teacher. Additional time should be allotted for the transcription process.
- When deciding between a manual and electronic brailler a student's hand strength, dexterity and stamina should be taken into consideration (see electronic braillers section).
- Sound dampening mats under the device should be used to reduce the noise the brailler makes.
- Although portable it is beneficial for the student to have one Perkins brailler at home and one at school.
- The student should have a dedicated brailler for their use.
- A brailler, separate from the student's, should be available for braille production at school.
- Customized attachments exist that will assist students with spatial math.

## Slate and Stylus



A slate and stylus is the equivalent of a pencil and paper for a sighted person.

A student who uses a slate and stylus is one who needs to write brief notes and or labels.



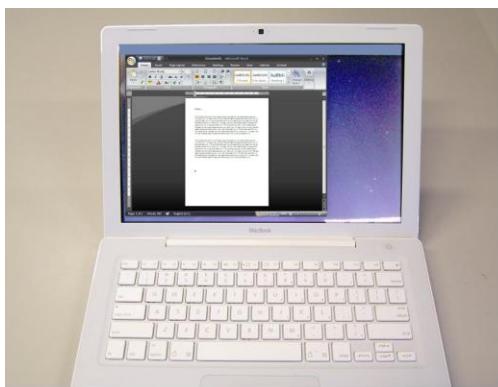
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Highly portable</li><li>• Fits in a pocket or purse</li><li>• Use any kind of paper product</li></ul>	<ul style="list-style-type: none"><li>• Requires the user to enter braille from right to left</li><li>• Braille dots are written in reverse</li><li>• Both slate and stylus are required to produce braille</li><li>• Requires additional instruction and practice to become proficient</li><li>• Not often taught</li></ul>

### Best Practices and Considerations:

- Student must have thorough knowledge of braille
- Provide meaningful practice and application (labeling, tactile diagram)

## **Section 2: E-text Strategies**

## Word Processing Software



Word processing software is an application that allows the student to write and edit their work in an electronic format.

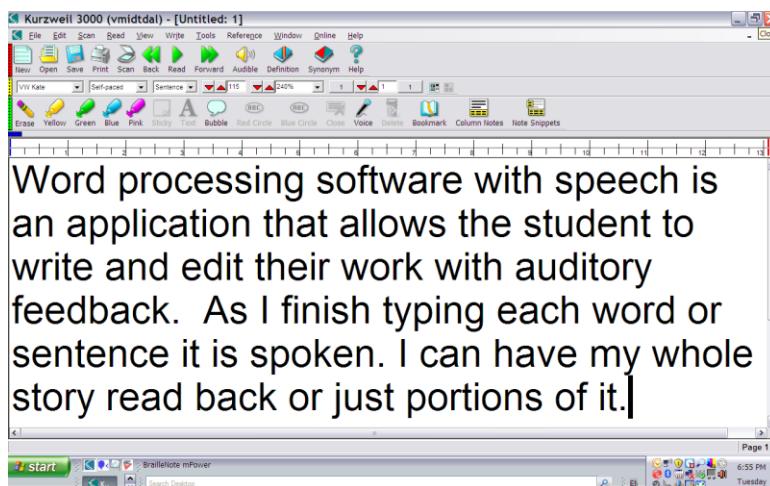
A student who uses word processing software is one who benefits from inputting and editing their written work electronically.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Ease of storage, organization and retrieval of files</li><li>• Ability to manipulate text (e.g. cut and paste)</li><li>• Ability to use keyboard shortcuts for navigation and editing text</li><li>• Easy sharing of written work (e.g. email, USB flash drive)</li><li>• Creates consistent and legible work</li><li>• Can accommodate visual preferences e.g. contrast, font size</li><li>• Desktop and menu fonts can be adjusted</li></ul>	<ul style="list-style-type: none"><li>• Can create an isolated work environment</li><li>• Students may be viewed as being different or having an advantage</li><li>• Maintenance of equipment can be an issue</li></ul>

### Best Practices and Considerations:

- Students who would benefit from using word processing software should be encouraged to do so.
- Prerequisites are basic computer and file management skills.
- Keyboarding skills should be introduced and encouraged as soon as possible.
- Keyboarding should be taught as a separate skill.
- Saving written work requires an understanding of different file types and the programs required to open them.
- Keyboard shortcuts should be taught for efficiency in navigation and editing of text.
- Students can use electronic cursive writing fonts for handwriting assignments.
- Students will need instruction on the unique features of the program (e.g. font enlargement, contrast).
- Adapted keyboards can be used for students who have physical access needs.

## Word Processing Software with Speech



ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Immediate feedback</li><li>• Independence in the writing process</li><li>• Some programs can track (highlight) text so student knows which word is being read during the editing process</li><li>• May reduce fatigue in the process of editing</li><li>• Student can choose the level of speech support e.g. characters, words sentences when typing</li><li>• Speech may be used to facilitate proof reading e.g. fluency, grammatical structure</li></ul>	<ul style="list-style-type: none"><li>• May require headphones</li><li>• Student may have to listen to both the teacher and the speech feedback</li></ul>

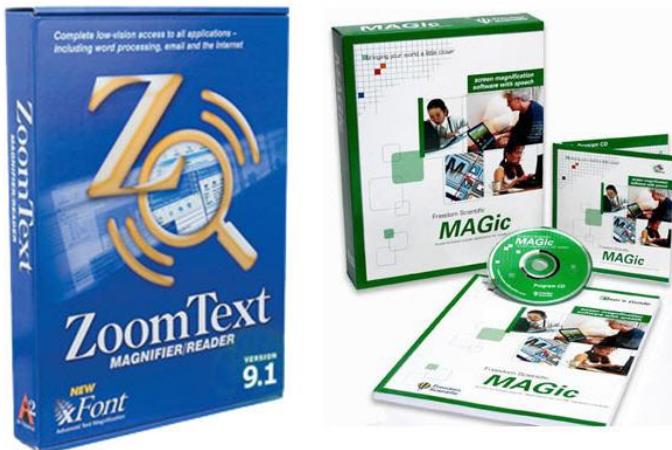
### Best Practices and Considerations:

- Student should be encouraged to stop computer speech when listening to the teacher.
- Save speech supports as the default or user preference so that the student does not have to make the adjustments each time. School district security software such as Deep Freeze must be off to save these changes.
- Students may require special instruction in how to customize speech settings (e.g. volume, speed, voice).

Word processing software with speech is an application that allows the student to write and edit their work with auditory feedback

A student who uses word processing software with speech requires auditory feedback for editing and navigation purposes

## Word Processing with Screen Magnification Software



Screen magnification software allows for enlargement and colour enhancement of text and enlargement and colour enhancement of cursor and mouse pointer.

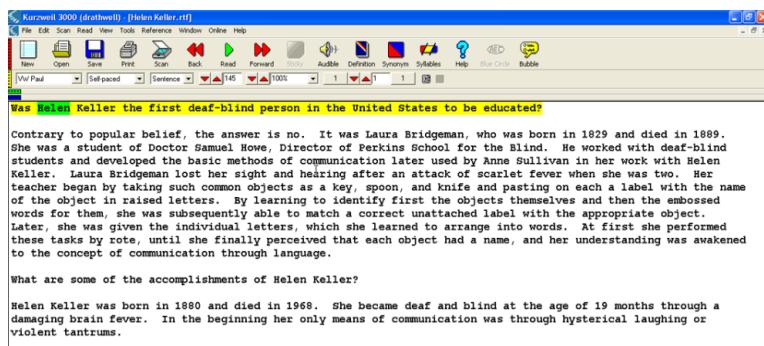
A student who uses screen magnification software is one who requires enlargement and other enhancements of some or all on-screen elements to accommodate student's visual preferences.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>Customization of text size and colour</li><li>Ability to customize mouse attributes (i.e. size, colour and style)</li><li>Menus and dialogue boxes can be enlarged</li><li>Custom magnification (e.g. only parts of screen)</li><li>Promotes independence by reducing need for scribing</li><li>Can be turned off or on as needed</li></ul>	<ul style="list-style-type: none"><li>Amount of information on the screen is reduced</li><li>Screen navigation is more complex</li></ul>

### Best Practices and Considerations:

- Depending on the writing task, text elements, (e.g. superscript, accents) may need to be enhanced .
- Students who require enlargement 5x or beyond will benefit from a screen reader program.
- Some students may benefit from software that provides both magnification and speech output.
- Student needs to gain independence in adapting their software to meet their visual needs.
  - Students with fluctuating vision may need to use magnification for some subjects but not others.
  - Students with fluctuating vision may be able to use regular font for part of the day.
- Student needs to learn software program for efficient and independent use.
- Keyboard shortcuts should be taught for efficiency in navigation and production of written output.

## Word Processing with Speech and Screen Magnification Software



Tracking support means that words or sentences are highlighted on the screen as e-text is read to the student. Some programs allow this highlighting to be used with or without speech.

An example of a student who would benefit from tracking support would be one with difficulty keeping his/her place when reading due to visual impairments that include: visual acuity loss, eye muscle imbalances, visual field deficits, visual perceptual skill delays and processing problems.

Not at screen reader stage yet.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> <li>• Students can see the magnified field and hear it as well</li> <li>• Facilitates file management skills by providing auditory and visual feedback e.g. dialogue boxes, edit fields</li> <li>• Multi modal feedback when writing reduces fatigue and increase accuracy</li> </ul>	<ul style="list-style-type: none"> <li>• Using both speech and screen magnification may be overwhelming</li> <li>• May not be suitable for foreign languages</li> <li>• May require headphones</li> <li>• Student may have to listen to both the teacher and the speech feedback</li> </ul>

## **Best Practices and Considerations:**

- Some students may prefer to use magnification without the speech support and vice versa.
  - Keyboard shortcuts should be taught for efficiency in navigation and manipulation of text.
  - May need to change the pronunciation of words e.g. proper nouns, scientific terms.
  - Magnification is preferable to speech as it promotes spelling, punctuation etc.
  - A vision teacher should be consulted to help establish the best features and settings of the software for student needs.
  - Writing tasks may take the student longer to complete.
  - Writing tasks may need to adapted due to the visual complexity of the task (e.g. maps, diagrams).

## Electronic Brailler



An electronic brailler is a 6-key entry device that produces braille on paper with editing capability and file storage.

A student who uses a electronic brailler has a significant visual impairment and requires braille as a writing medium.

An electronic brailler can be used by students who are transitioning to a braille notetaker or benefits from the use of paper braille.

The most common electronic brailler used in BC schools is the Mountbatten.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Ease of editing</li><li>• File storage</li><li>• Visual display option (i.e. Mimic)</li><li>• Electronic braille require less hand strength to operate than a manual braille, (e.g. Perkins), thereby reducing fatigue and increasing written output</li><li>• Typing echo helps support writing</li><li>• Can add a QWERTY keyboard for cooperative writing activities</li></ul>	<ul style="list-style-type: none"><li>• Can be noisy and distracting in the classroom</li><li>• Requires access to power outlets</li></ul>

### Best Practices and Considerations:

- Although best practice is for the student to do their work in the classroom, some extended writing activities may need to be completed outside the classroom. This may be due to the student requiring more time, pre-teaching, and/or the device may be too noisy for extended use in the classroom.
- Student should be encouraged to double space their work to leave room for print to be transcribed above the braille by the braillist or vision teacher. Additional time should be allotted for the transcription process.
- Having qwerty keyboard allows the teacher to provide written instructions to the student.
- Use of a qwerty keyboard and visual display allows for cooperative learning activities with peers.
- Visual display allows the teacher to monitor the student's writing.

## Braille Notetaker



A braille note taker is a lightweight braille device with a built in speech synthesizer and an 18 or 40 refreshable braille display.

A student who would typically use this is one whose primary writing medium is braille and requires a light, portable system.

Available with both QWERTY and braille keyboards for input.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>Ability to access and complete same assignments as sighted peers</li><li>Teachers can provide the student with electronic text files</li><li>Writing assignments are stored and accessible</li><li>Completed writing assignments can be submitted in print for teachers to access</li><li>Word processing editing tools are available in the notetaker</li><li>Students have choice of using either a QWERTY keyboard or a Braille keyboard</li><li>Files are automatically saved</li><li>Are instantly on and ready for use</li><li>Take up very little space on the desk</li><li>Portable</li><li>Battery charge can last up to 20 hours</li><li>Long life span compared to a laptop</li><li>Lifelong tool for writing</li></ul>	<ul style="list-style-type: none"><li>Completion and labeling of diagrams, charts, tables, maps cannot be done with a notetaker</li><li>Often a connection to a computer and specialized software and printer is required to print hard copy print or Braille</li><li>Must be recharged and backed up</li><li>Device is delicate</li><li>Not easy to provide technical support for specialized devices</li><li>Devices are costly</li><li>Requires specialized training</li><li>Difficult for teacher to directly monitor student writing without output to a visual display</li></ul>

### Best Practices and Considerations:

- A Braille notetaker can be connected to a visual display so a teacher can monitor the student while writing.
- Students should be given an option to use either a QWERTY or a 6-key Braille keyboard.
- The Braille notetaker allows the student to complete writing assignments in class.
- Student should have ready access to printers and embossers.
- Students should take responsibility for the battery charging of the device.

## Word Processing Software with Refreshable Braille



A refreshable braille display or braille terminal is an electro-mechanical device for displaying braille characters, usually by means of raising dots through holes in a flat surface.

This device allows braille output from text produced in word processing software.

A student will use a refreshable braille device to check and edit their writing without the need for a printed hard copy.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Immediate feedback of what has been written</li><li>• Independence in the writing process</li><li>• No need for paper</li><li>• Editing process (cut, copy, paste, spell check) is easier than using hard copy</li><li>• File management using refreshable braille with a computer or a notetaker is very efficient</li></ul>	<ul style="list-style-type: none"><li>• Fragility is an issue</li><li>• Navigating a page on a braille display can reduce the contextual information of the layout of the document</li></ul>

### Best Practices and Considerations:

- The student should be encouraged to work with clean hands to prevent the braille dots from sticking.
- Use of the device needs to be learned in order to take advantage of the settings and options.
- When transporting these devices they need to be handled carefully. Proper care and maintenance is important.
- For optimum use the student should have a working knowledge of contracted braille.
- Vision teachers should assess student's ability to tactually read back their writing with the refreshable braille display.

## Word Processing with Speech and Refreshable Braille



Word processing software with speech and refreshable braille adds speech and tactile feedback in the writing process.

A student would use both speech and refreshable braille in the editing process in order to minimize the time in the reviewing of written work. Speech provides quick access to the written work. Refreshable braille allows for review of the mechanics of writing, i.e. spelling, punctuation etc.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Speed</li><li>• It appeals to students who benefit from a multiple sensory approach to writing</li><li>• For students who have fatigue issues they can switch to speech when editing their writing</li><li>• Gives students a choice of how they access their written work</li></ul>	<ul style="list-style-type: none"><li>• May need headphones in the classroom</li><li>• Student may have to listen to both the teacher and the speech feedback</li><li>• Proper nouns may be mispronounced (e.g. Quesnel pronounced Kvesnel)</li></ul>

### Best Practices and Considerations:

- Students should be encouraged to use the modality (i.e. speech or braille) that best suits their needs for the writing task.
- Students should be encouraged to work with clean hands to prevent the braille dots from sticking.
- Students using speech for editing should only have a headphone on one ear so that they can listen to the teacher and/or classroom discussion.

## **Section 3: Oral Strategies**

## Dictation



Dictation is speech intended for reproduction in writing.

A student who would use dictation as a writing strategy is one who needs a quick or alternative method to record their ideas.

A student can dictate their ideas to a person or a recording device.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Portable</li><li>• Compact</li><li>• Simple system</li><li>• Digital recorders allow for indexing and easy navigation between recordings</li></ul>	<ul style="list-style-type: none"><li>• Requires transcriber or additional step to convert audio recording into written work.</li><li>• Can be easily lost because of its small size.</li><li>• Using a tape recorder, and analog system, does not allow for indexing and easy navigation between recordings</li></ul>

### Best Practices and Considerations:

- If the device fails, all work is lost.
- Devices are run on battery and will require planning in maintaining the power supply.
- Students who require speech support to access device settings and menus are limited to only a few devices.
- Important auditory information should be converted to hard copy or electronic text to support literacy.
- For students who do not require speech support for their device, one can be purchased off-the-shelf with particular attention to the physical and visual access features.

## **Section 4: Electronic Text Output**

## Laser and Inkjet Printers



A laser or inkjet printer is used to produce a print copy of electronic text and/or images.

A student would use a printer to produce a print copy of their work to hand in to their teacher or for their own reference.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• Usually readily available</li><li>• Provides accessibility to student's work by sighted peers and teachers</li><li>• Provides a print copy as a back up to the electronic version</li><li>• Can be compact and portable</li><li>• Can be wirelessly accessed</li></ul>	<ul style="list-style-type: none"><li>• Cost of inkjet cartridges can become expensive</li></ul>

### Best Practices and Considerations:

- If student requires access to multiple printers within the school environment, there is a potential for printer driver conflicts on the computer.
- If student is able to print to multiple printers, they need to know the location of the printer they are sending their work to and the name of the printer to select from the Print dialogue box.
- If a team chooses to use a network printer, there may be network protection software (e.g. Deep Freeze) loaded onto the student's computer that will restrict the student's ability to save files and change settings.
- Large print users should reduce the font size before printing for sighted teachers and peers.
- Braille Notetakers have a limited compatibility to printers for direct printing. This should be researched.
- If students are using a memory stick to access printing on another computer, the software the student has used to save the file must be on the computer that the student will be printing from.

## Braille Embosser



A Braille Embosser is a printer that produces braille (raised dots) on paper.

A student will use a Braille Embosser to print out a braille copy of their work to hand in to their vision teacher, braille transcriber or for their own reference.

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"><li>• A student can have a paper copy of their own work</li></ul>	<ul style="list-style-type: none"><li>• The embossing process is quite loud</li><li>• Embossers and paper are expensive</li><li>• Embossers are heavy, fragile and hard to move around</li></ul>

### Best Practices and Considerations:

- Because of the noise the embosser makes while printing, it is usually housed in a location close to but not in the student's classroom. Sound proofing materials and covers can be purchased or made to reduce the noise.
- A braille copy of electronic text using an embosser can only be produced through a braille Notetaker or with a computer and braille translation software.
- Braille Notetakers have a limited compatibility to embossers for direct printing. This should be researched.
- There will be specific configurations that need to be set up on the embosser, Braille Notetaker and in the braille translation software.
- Braille embossers that produce print and braille on the same page are available but are very expensive.