



Test Delivery System

Braille Requirements and Testing Manual

2018–2019

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Section I. Introduction to the Manual

This manual provides information about supported hardware and software requirements for Braille testing and instructions for configuring JAWS. Information about navigating a test with JAWS is also included.

Organization of the Manual

Below is a brief description of each section in this manual, as well as common symbols and elements used throughout the document.

- [Overview of Braille Testing](#) provides an introduction to testing with Braille.
- [Technology Requirements](#) outlines the supported operating systems and hardware and software requirements for students and Test Administrators (TAs).
- [Configuring JAWS for Online Testing](#) provides instructions for ensuring that JAWS works with the secure browser.
- [Configuring Printing Software on TA Computers](#) includes information about configuring BRF and PRN file types.
- [Administering Braille Tests](#) describes the test administration workflow and explains how to print test content.
- [Navigating the Test with JAWS](#) provides an overview of JAWS keyboard commands for use in online tests, as well as instructions for signing in and responding to questions.

Document Conventions

Table 1. Key Symbols

Element	Description
	Alert: This symbol accompanies important information regarding a task that may cause minor errors.
	Note: This symbol accompanies additional information that may be of interest.
	Policy: This symbol accompanies information that is based on policy set by the Rhode Island Department of Education.
	Tip: This symbol accompanies useful suggestions.
	Warning: This symbol accompanies important information regarding actions that may cause fatal errors.

Intended Audience

This manual is intended for multiple audiences. [Table 2](#) explains which sections of the manual apply to each audience type. Some sections apply to multiple audiences.

Table 2. Manual Audiences and Relevant Sections

Audience Type	Applicable Sections
Technology Coordinator	<ul style="list-style-type: none"> • Overview of Braille Testing • Technology Requirements • Configuring JAWS for Online Testing • Configuring Printing Software on TA Computers
Test Administrator (TA)	<ul style="list-style-type: none"> • Overview of Braille Testing • Technology Requirements • Administering Braille Tests
Student (with a Braille accommodation)	<ul style="list-style-type: none"> • Navigating the Test with JAWS

Technology Coordinators should be familiar with installing and configuring settings for hardware and software used with Braille testing. They should be familiar with locating files via a file manager and editing text files.

Test Administrators (TAs) should be familiar with using a web browser to retrieve data and fill out web forms. They should also be familiar with printing documents and adjusting computer audio settings.

Students should be familiar with using screen readers and Refreshable Braille Displays (RBDs) to navigate web pages.

Additional Resources

For information about supported operating systems and browsers, see the [System Requirements for Online Testing](#) document.

For information about installing and using the secure browser, see the *Secure Browser Installation Manual*.

For information about administering online tests, see the *Test Administrator User Guide*.

For information about network and internet requirements and general peripheral and software requirements, see the [Technical Specifications Manual for Online Testing](#).

For information about policies and procedures that govern secure and valid test administration, see the *Test Administration Manual*.

These documents are available on the Rhode Island Next Generation Science Assessment portal (<http://ri.portal.airast.org/>).

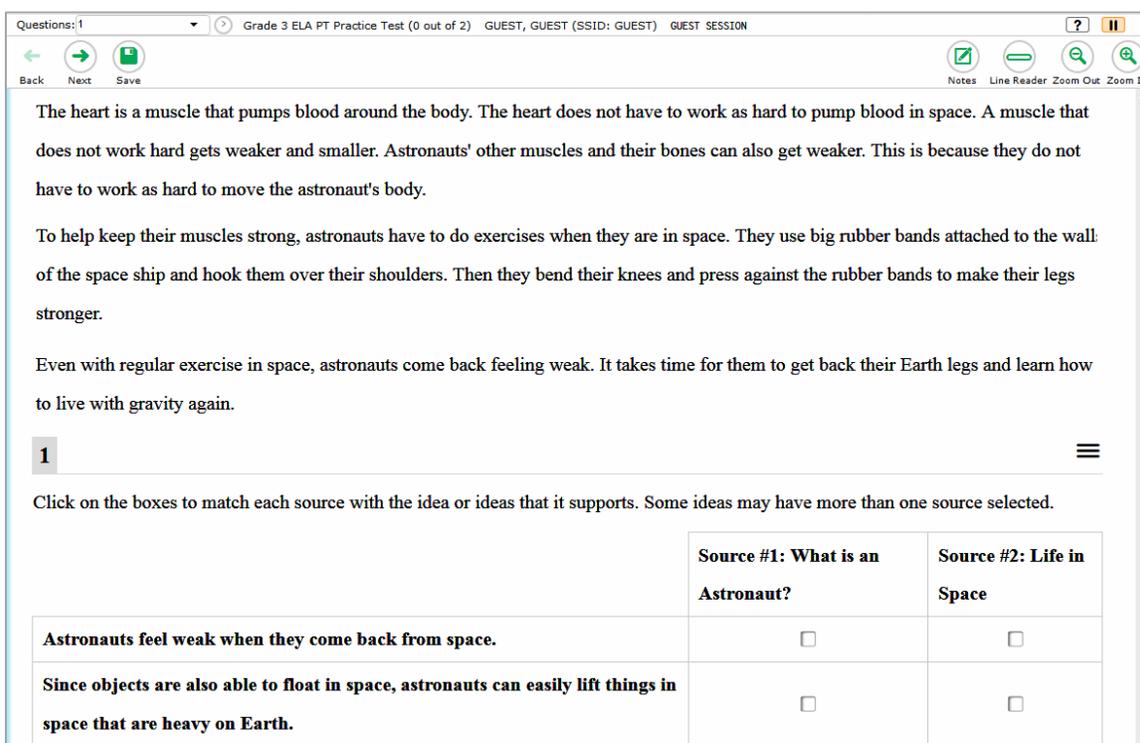
Section II. Overview of Braille Testing

Students with a Braille accommodation receive online tests in an accessible format via the Test Delivery System’s streamlined mode (see [Figure 1](#)). The streamlined mode facilitates supported screen reading software and printing to Braille embossers.

About Streamlined Mode

When a student’s test presentation is set to Braille, the test appears in streamlined mode automatically. This layout arranges the test content vertically. The stimuli appear at the top of the page, and questions appear in sequence below their associated stimulus.

Figure 1. Sample Streamlined Layout



Overview of Braille Types

The Braille types available for online science assessments consist of one Braille formatting attribute which has two options (see [Table 3](#)). The Braille type in the Test Delivery System (TDS) is a different combination of these two attributes.

Table 3. Braille Formatting Attribute Options

Braille Code	Contraction Type	Math Type
Unified English Braille (UEB)	Contracted	Nemeth Math
Unified English Braille (UEB)	Uncontracted	Nemeth Math

Overview of Braille Output Options

For Science assessments, all test content is delivered in Nemeth Braille via a Braille embosser.



Note: All science items need to be embossed. It is recommended that TAs have extra Braille paper on hand during test administration.

Section III. Technology Requirements

The technology requirements in this section are specific to online testing with Braille. For more information about requirements for online testing, refer to the [Systems Requirements for Online Testing](#) document.

Supported Operating Systems and Related Requirements

The following must be installed on computers used for Braille testing.

	Requirements for Student Computers	Requirements for TA Computers
Operating Systems	<ul style="list-style-type: none"> Windows 7 SP1, 8.0–8.1, 10 	<ul style="list-style-type: none"> Windows 7 SP1, 8.0–8.1, 10
Hardware	<ul style="list-style-type: none"> Refreshable Braille Display (RBD): AIR recommends an RBD that has a minimum of 40 cells, such as the ALVA USB 640 40-cell Braille display. However, if students prefer using a display with fewer cells (such as the APEX HumanWare Braille Display 18), they may do so. 	<ul style="list-style-type: none"> ViewPlus Tiger Max Embosser
Software	<ul style="list-style-type: none"> Windows Secure Browser 4 JAWS Screen Reader 16–18, 2018 	<ul style="list-style-type: none"> Supported web browser Duxbury Braille Translator 11.1, 11.2, 11.3, 12.1, or 12.2 ViewPlus Desktop Embosser driver (for ViewPlus Tiger Max Embosser)

*For security purposes, tablets are not supported for Braille testing. Online Braille tests do not support Mac OS X or its associated screen readers.



Note: TDS supports screen readers other than JAWS; however, only JAWS screen readers have been thoroughly tested with the online testing system.

Software Resources

This section provides resources for downloading software required for Braille testing.

Software for Students

- Windows Secure Browser:

Students use the same Windows secure browser that is used for all online testing. For secure browser installation instructions, refer to the [Secure Browser Installation Manual](#).

- JAWS Screen Reader:

For information about JAWS, go to <http://www.freedomscientific.com/products/fs/jaws-product-page.asp>.

Software for Test Administrators

- Duxbury Braille Translator:

This software allows printing of questions and stimuli that do not contain images. You can download the DBT software at http://www.duxburysystems.com/dbt_main.asp.

- ViewPlus Desktop Embosser Driver:

The driver includes the Tiger Viewer software, which allows printing of questions and stimuli that contain tactile or spatial components (such as images). You can download the driver at <https://viewplus.com/viewplus-support/desktop-driver/>.

Section IV. Configuring JAWS for Online Testing

You must configure JAWS before students use it for online testing. This section contains instructions for the following:

- [Configuring JAWS to Recognize the Secure Browser](#)
- [Applying Settings for Contracted or Uncontracted Braille](#)
- [Configuring JAWS to Speak “Dollars”](#)
- [Optional JAWS Voice Adjustment Settings](#)



Note: The figures used throughout this section reflect the JAWS 2018 user interface. The user interface for earlier versions of JAWS may appear differently.

Configuring JAWS to Recognize the Secure Browser

You must edit the JAWS configuration file so that the software recognizes the secure browser.



Note: The examples below are for JAWS 2018 installed to the default location. If your version is installed to a different location, navigate to the appropriate directory.

To modify the configuration file:

1. Open the JAWS ConfigNames.ini file. This file may appear in two folders. Depending on how JAWS is installed on your computer, you may need to modify both files:
 - Required: Start > All Programs > JAWS 2018 > Explore JAWS > Explore Shared Settings
 - Optional: Start > All Programs > JAWS 2018 > Explore JAWS > Explore My Settings
2. In the ConfigNames.ini file, locate the line of text containing `firefox:3=firefox`. At the end of this line, press **Enter** and type `RISecureBrowser=Firefox`
3. Save the file.



Note: If you receive an error that you do not have permission to save the .ini file to this location, save the file to your desktop as `ConfigNames.ini`. After saving the updated .ini file, copy it to the folder containing the original .ini file (referenced in step [1](#)). Confirm that you want to replace the original file with the file you created.

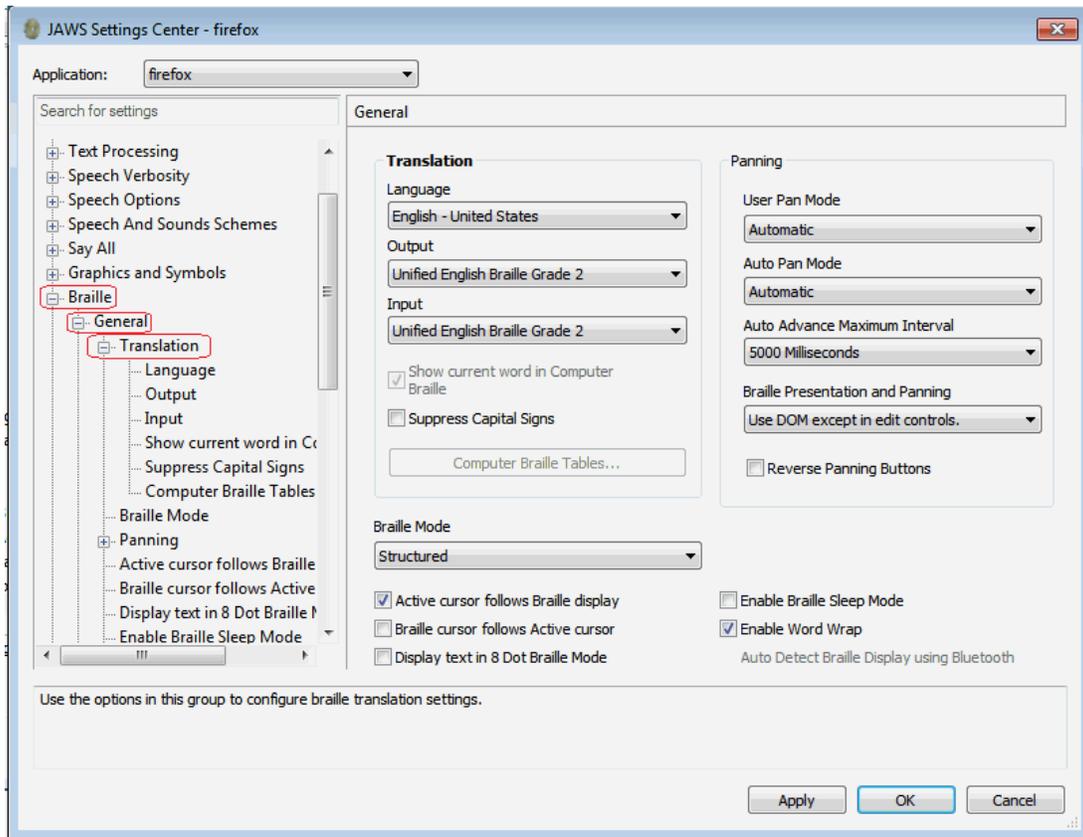
Applying Settings for Contracted or Uncontracted Braille

In order for students to use contracted or uncontracted Literary Braille with their RBD, the correct JAWS settings must be applied prior to launching the secure browser.

To apply the correct JAWS settings:

1. Open JAWS and go to **Utilities > Settings Center**. The **Settings Center** window opens.
2. From the **Application** drop-down list at the top of the window, select **firefox**.
3. Do one of the following:
 - If you are using JAWS 16, expand the *Braille* settings, *General* sub-settings, and *Translation* sub-settings in the *Search for settings* panel on the left. Click **Contracted Braille Translation**. The **Settings Center** window displays the options for Contracted Braille Translation.
 - i. In the *Translation* section, select the required option from the **Contracted Braille Translation** drop-down list. For a student who prefers contracted Braille, select **Input and Output**. For a student who prefers uncontracted Braille, select **Off**.
 - If you are using JAWS 17 or later, expand the *Braille* settings, *General* sub-settings, and *Translation* sub-settings in the *Search for settings* panel on the left. The **Settings Center** window displays the options for Braille Translation (see [Figure 2](#)).
 - i. In the *Translation* section, verify the **Language** drop-down list is set to **English – United States**. For a student who prefers contracted Braille, select **Unified English Braille Grade 2** from the **Output** and **Input** drop-down lists. For a student who prefers uncontracted Braille, select **Unified English Braille Grade 1** from the **Output** drop-down list.

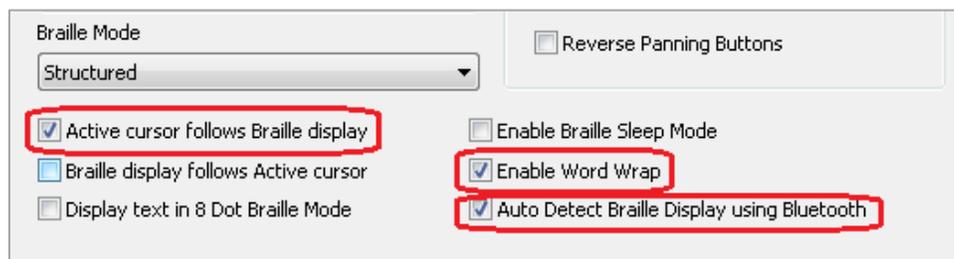
Figure 2. JAWS Settings Center Window



4. In the *Braille Mode* section (see [Figure 3](#)), ensure that only the following settings are checked:

- Active cursor follows Braille display
- Enable Word Wrap
- Auto Detect Braille Display using Bluetooth (if available)

Figure 3. Braille Mode Section



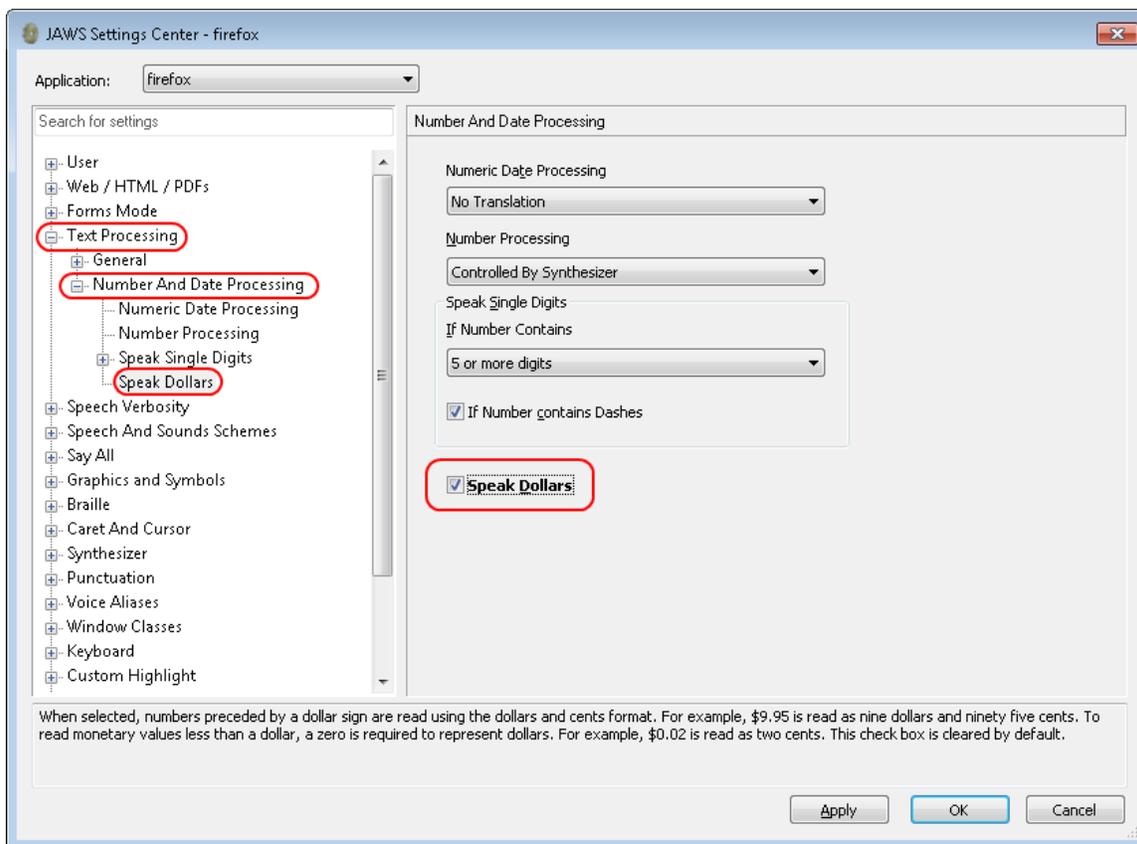
5. Click **Apply**, and then click **OK**.

Configuring JAWS to Speak “Dollars”

To ensure that JAWS correctly speaks the dollar (\$) symbol:

1. Open JAWS and go to **Utilities > Settings Center**. The **Settings Center** window opens.
2. In the *Search for settings* panel on the left, expand the *Text Processing* settings and *Number And Date Processing* sub-settings. Click **Speak Dollars**. The **Settings Center** window displays the *Number And Date Processing* options (see [Figure 4](#)).

Figure 4. Number and Date Processing



3. Mark the **Speak Dollars** checkbox.
4. Click **Apply**, and then click **OK**.

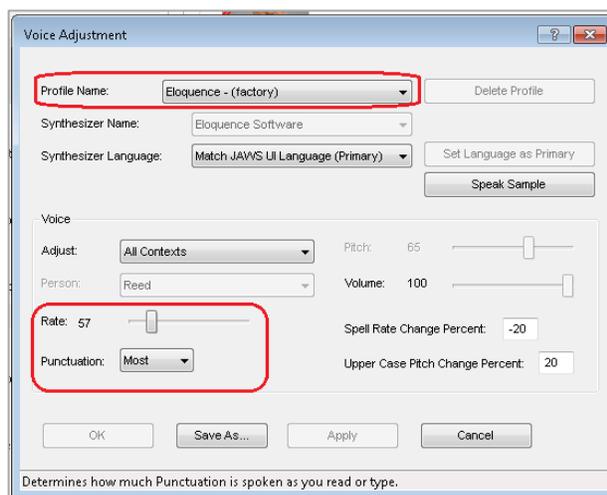
Optional JAWS Voice Adjustment Settings

Prior to launching the secure browser, you can adjust JAWS voice settings for students based on their individual needs. You must set the Voice Profile, Speaking Rate, and Punctuation settings prior to administering assessments. Students should take practice tests using JAWS so they can determine whether these settings need to be adjusted.

To adjust JAWS voice settings:

1. Open JAWS and go to **Options > Voices > Voice Adjustment**. The **Voice Adjustment** window opens (see [Figure 5](#)).
2. To adjust the voice profile, in the *Profile* section, select a voice profile from the **Profile Name** drop-down list. Click **Apply**.
3. To adjust the voice rate, in the *Voice* section, drag the **Rate** slider to the desired rate speed (the lower the rate, the slower the words are read aloud). Click **Apply**.
4. To adjust the punctuation, click the **Punctuation** drop-down list. Select from the following options: **None**, **Some**, **Most**, or **All**. Click **Apply**.
5. When all settings are saved, click **OK**.

Figure 5. JAWS Voice Adjustment



Section V. Configuring Printing Software on TA Computers

The TDS allows students to emboss test material with TA approval. The software that sends print requests to the Braille embosser must be installed on computers that TAs use for test sessions.

The embossed output for student print requests depends on the file type associated with a test question. There are two types of files:

- **Braille Ready File (BRF):** BRF file types are used for print requests containing only text (including formatted tables). The Duxbury Braille Translator software handles BRF files.
- **Printer Output File (PRN):** PRN file types are used for print requests containing tactile or spatial components (such as images). The ViewPlus Tiger Viewer software handles PRN files.

Upon approving a print request, the TA sends the file to the embosser using either Duxbury or ViewPlus software.

Instructions for printing files are located in the section [Administering Braille Tests](#).



Note: TAs must ensure that the Braille Type test setting for the student is correct prior to approving the student for testing. The Braille Type test setting determines what file type is used for student print requests.

Opening Sample BRF and PRN Files on TA Computers

This section contains instructions for opening sample BRF and PRN files with the appropriate software program and setting default printing preferences. The Duxbury Braille Translator and ViewPlus Tiger Viewer software must already be installed.

Configuring BRF Files with the Duxbury Braille Translator Software

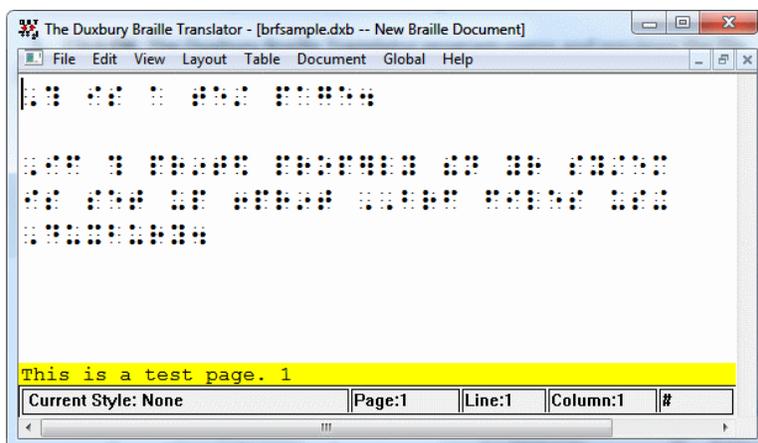
1. In the TA Site, click **Help Guide** at the top of the page. The online *TA User Guide* opens.
 - a. Navigate to the *Sample Braille Files* appendix.
2. Click **Sample BRF File**. The file dialog window opens.
3. Do one of the following:
 - From the **Open with** drop-down list, select **Duxbury Braille Translator**. Click **OK**. The Duxbury Braille Translator program opens and previews the file (see [Figure 6](#)).
 - If the Duxbury Braille Translator is not available as a selectable program, do the following (otherwise skip to step [4](#)):
 - i. Click **Browse**. The *Choose Helper Application* window opens.

- ii. Navigate to the Duxbury folder and open it.
- iii. Open the DBT folder and select **dbtw.exe**.
- iv. In the **Open with** window, select **Duxbury Braille Translator** and mark the **Do this automatically for files like this from now on** checkbox.
- v. Click **OK**. The Duxbury Braille Translator program opens and previews the file (see [Figure 6](#)).



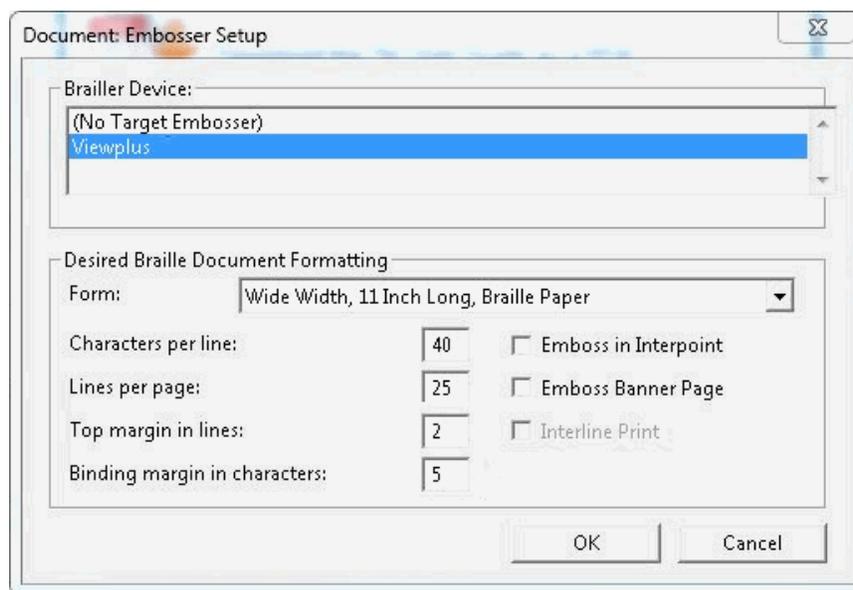
Note: If the **Import File** window appears, set the Template to either English (American) – Standard Literary Format (for Duxbury 11.2 or earlier) or English (BANA Pre-UEB) – Literary Format (for Duxbury 11.3 or later), and set the Import Filter to Formatted Braille.

Figure 6. Duxbury Braille Translator Window



4. In the **Duxbury Braille Translator** window, go to **Global > Embosser Setup**. The **Global: Embosser Setup** window appears. To add a new embosser, do the following:
 - a. Click **New**. The **Embosser Setup – Untitled Configuration** window appears.
 - b. From the **Embosser Model** drop-down list, select the required embosser type.
 - c. From the **Send to Printer** drop-down list, select the required embosser’s name and click **OK**.
 - d. In the **Global: Embosser Setup** window, click **OK**.
5. In the **Duxbury Braille Translator** window, go to **Document > Embosser Setup**. The **Document: Embosser Setup** window opens (see [Figure 7](#)).

Figure 7. Document: Embosser Setup Window

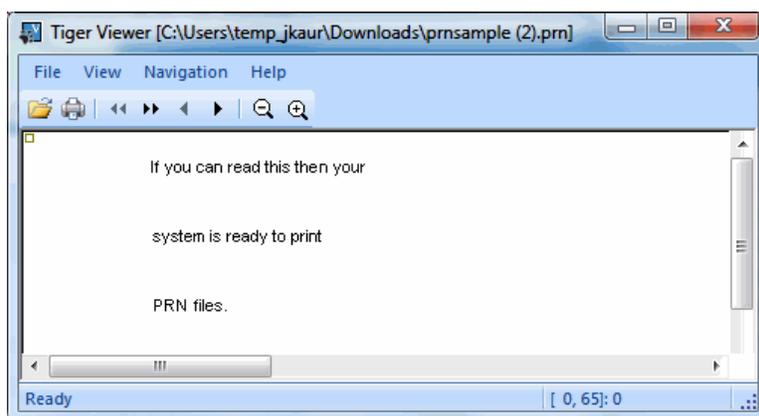


6. In the **Document: Embosser Setup** window, ensure the following are selected:
 - *Braille Device: ViewPlus Max* (or other ViewPlus embosser)
 - The following *Braille Document Formatting* options must be set:
 - **Emboss in Interpoint** checkbox is blank
 - Top margin in lines: 2
 - Binding margin in characters: 5
 - When you are done, click **OK**.
7. In the **Duxbury Braille Translator** window, go to **Global > Formatted Braille Importer**.
 - a. In the **Global: Formatted Braille Importer** window that appears, mark the **Read formatted Braille without interpretation** checkbox and click **OK**.
8. In the **Duxbury Braille Translator** window, go to **File > Emboss**. The **File: Emboss...** window opens.
9. In the **File: Emboss...** window, ensure that only one copy is being printed and that the page range is set to **All**.
10. Click **OK**.

Configuring PRN Files with the Tiger Viewer Software

1. In the TA Site, click **Help Guide** at the top of the page. The online *TA User Guide* opens.
 - a. Navigate to the *Sample Braille Files* appendix.
2. Click **Sample PRN File**. The file dialog window opens.
3. Do one of the following:
 - From the **Open with** drop-down list, select **Tiger Viewer** and click **OK**. The Tiger Viewer program opens and previews the file (see [Figure 8](#)).
 - If Tiger Viewer is not available as a selectable program, do the following (otherwise skip to step 4):
 - i. Click **Browse**. The *Choose Helper Application* window opens.
 - ii. Navigate to the ViewPlus folder and open it.
 - iii. Open the Tiger folder.
 - iv. Open the **ViewPlus Max** folder (the Tiger folder may contain several ViewPlus embosser folders) and select **TigerViewer.exe**.
 - v. In the *Open with* window, select **Tiger Viewer** and mark the **Do this automatically for files like this from now on** checkbox.
 - vi. Click **OK**. The Tiger Viewer program opens and previews the file (see [Figure 8](#)).

Figure 8. Tiger Viewer Window



4. Go to **File > Print**. The *Print* window opens.
5. Ensure that the printer is set to **ViewPlus Max** (or other ViewPlus embosser) and that only one copy is being printed.
6. Click **Print**.

Section VI. Administering Braille Tests

This section provides an overview for TAs testing students with a Braille accommodation. The following sections are included:

- [Creating a Test Session and Approving Print Requests](#)
- [Sending Requested BRF and PRN Files to the Embosser](#)
- [Removing Files from the Web Browser Download Archive](#)

Creating a Test Session and Approving Print Requests

This section provides the general workflow for administering online tests in the TDS and approving print requests.



Note: For detailed instructions about online testing, see the *TA User Guide*. For information about testing policies, see the *Test Administration Manual*.

1. TA logs in to the appropriate TA Site and starts a test session.
2. TA opens JAWS on the student testing devices.
3. TA opens the secure browser on the student testing devices.
4. On the appropriate testing site, students sign in to the test session and select tests.
5. TA reviews student's test settings and verifies the following:



Note: If any of these settings cannot be edited in the TA Site, then they must be updated in TIDE before the student can begin testing.

- *Presentation* is set to **Braille**.
- *Print on Request* is set to the appropriate option for the selected test.
- *Braille Type* is set to the student's preferred Braille option. For more information about Braille types, see the section [Overview of Braille Types](#).
- *Emboss Request Type* is set to **Auto-Request** or **On-Request**, depending on the rules for the selected test.
- *Mute System Volume* is set to the appropriate option for the student and the screen reader that the student is using.
- *Item Badges* is set to **On**, if the student should test with question labels. For more information, see the section [About Question Labels](#).
- All other test settings are correct.

6. TA approves students for testing.
7. Students verify their test settings and start testing.
8. If a test requires manual print requests, students send print requests to the TA.
 - If a test has auto-emboss request enabled, print requests automatically appear on the TA Interface as students navigate the test.
9. TA reviews and approves print requests. For information about processing Braille print requests, see the section [Sending Requested BRF and PRN Files to the Embosser](#).



Policy: Deleting Files and Discarding Test Material

When the test session is over, you must delete and discard all test materials.

For instructions on deleting downloaded files, see the [Removing Files from the Web Browser Download Archive](#) section.

Sending Requested BRF and PRN Files to the Embosser

After approving print requests, TAs send the requested files to the embosser.

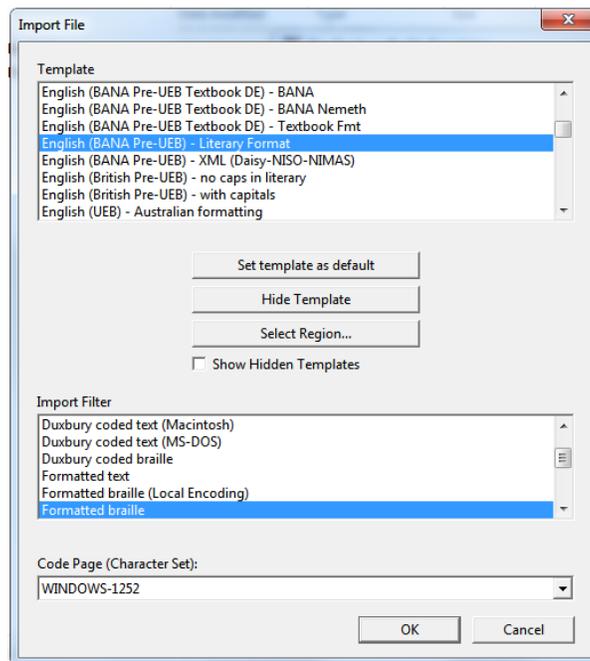


Alert: When administering tests, be sure to plug the embosser into the same USB port that was used when it was first set up for testing. Otherwise, the computer may identify the embosser as a new device and require you to set it up again.

Printing BRF Files

1. When you approve a print request that prints in BRF format, a print dialog window opens.
 - a. Select **Open with**.
 - b. In the drop-down list, select **Duxbury Braille Translator**.
 - c. Click **OK**. The **Import File** window opens (see [Figure 9](#)).

Figure 9. Import File Window



2. Ensure that the following are selected:
 - Template:
 - For Duxbury 11.2 or earlier: **English (American) – Standard Literary Format**
 - For Duxbury 11.3 or later: **English (BANA Pre-UEB) – Literary Format**
 - Import Filter: **Formatted braille**
3. Click **OK**. The *Duxbury Braille Translator* preview window opens (see [Figure 6](#)).
4. Go to **File > Emboss**. The *File: Emboss* window opens.
5. Ensure that only one copy is being printed, the page range is set to **All**, and the Braille Device is set to **Viewplus Max** (or other ViewPlus embosser).
6. Click **OK**.

Embossing PRN Files

1. When you approve a print request that prints in PRN format, a print dialog window opens.
 - a. Select **Open with**.
 - b. In the drop-down list, select **Tiger Viewer**.
 - c. Click **OK**. The *Print current PRN File* window opens.

2. In the **Print current PRN File** window, ensure that the printer is set to **ViewPlus Max** (or another supported ViewPlus embosser) and that only one copy is being printed.
3. Click **Print**.



Note: If you encounter issues embossing PRN files using Tiger Viewer, try restarting the embosser and using the ViewPlus Designer program instead. ViewPlus Designer is part of the Tiger Software Suite included on the installation CD that comes with all ViewPlus embossers.

Removing Files from the Web Browser Download Archive

Most supported web browsers automatically save downloaded files. If your computer saves the BRF and PRN files from print requests, you must delete all test-related files from your browser's download archive, for security purposes.

To remove files in Google Chrome:

1. Open the Chrome menu  icon in the upper-right corner.
2. Select **Downloads**. The **Downloads** page opens.
3. Remove all test-related files by doing one of the following:
 - a. For each file, click **X**.
 - b. Click **Clear all** in the upper-right corner. Files saved to your computer are not deleted.

To remove files in Internet Explorer:

1. Click the settings gear  icon in the upper-right corner.
2. Select **View Downloads**. The **Downloads** window opens.
3. Select each file and press **Delete** on your keyboard.



Note: Depending on your download settings, you may also need to delete files from your Temporary Internet Files folder.

To remove files in Mozilla Firefox:

1. Open the **Tools** menu and select **Downloads**. The **Library** window opens.
2. Delete all test-related files by doing one of the following:
 - Select each file and press **Delete** on your keyboard.
 - Click **Clear Downloads** at the top of the window (if available). Files saved to your computer are not deleted.

Section VII. Navigating the Test with JAWS

This section explains how students navigate through the test using JAWS commands, including information about the following:

- [Navigating the Sign-In Pages](#)
- [Navigating Within the Test](#)
- [Responding to Questions](#)



Note: The instructions in this section provide only the keyboard commands for online testing. Students testing with a RBD that has router keys may also press the router key above the text for a particular button to move the cursor to that button. They can press the router key a second time to select that button instead of using the provided keyboard commands.

Navigating the Sign-In Pages

This section provides instructions about how students navigate the sign-in pages of the Student Testing Site. For more information about these pages, see the *Test Administrator User Guide*.

Sign-In Page:

1. To navigate between the fields, press **Tab**.
2. Press **Tab** to navigate to the *First Name* field. Students enter their first name.
3. Press **Tab** to navigate to the *Student ID* field. Students enter their SSID.
4. Press **Tab** to navigate to each *Session ID* field. If the first part of the Session ID is already entered, students enter the second and third parts of the Session ID in the available text boxes.
5. Press **Tab** to navigate to the **Sign In** button, and then press **Enter**.

Figure 10. Student Sign-In page

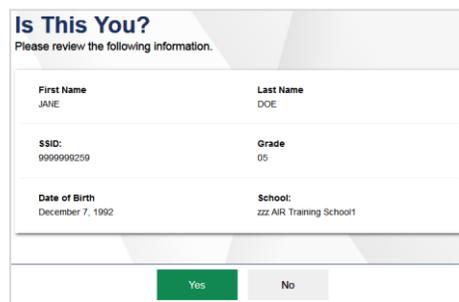
The screenshot shows a sign-in form with the following elements:

- Title:** Please Sign In
- First Name:** A text input field with a person icon to its left.
- Student ID:** A text input field with a list icon to its left.
- Session ID:** A text input field with a key icon to its left. The field contains the text 'PROD' followed by two empty text boxes separated by hyphens.
- Sign In Button:** A green rectangular button with the text 'Sign In' in white.

Is This You? Page:

1. To listen to each line of text, press the **Down** arrow. JAWS reads aloud the information.
2. To move to the **Yes** and **No** buttons, press **Tab**.
3. To select the **Yes** or **No** button, press **Enter**.

Figure 11. Is This You? Page



Your Tests Page:

1. To move to the first test listed on this page, press **Tab**.
2. To navigate between the test names, press **Tab**. The order of navigation is from left to right and top to bottom, in a zigzag pattern.
3. To start or resume the test in focus, press **Enter**.

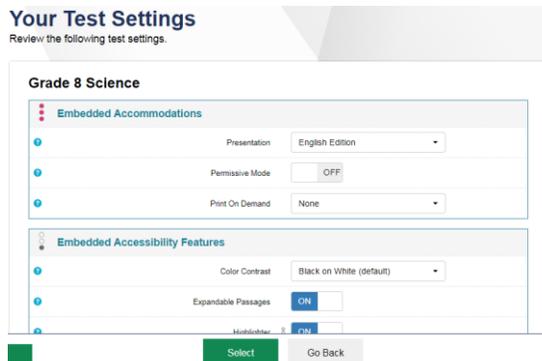
Figure 12. Your Tests Page



Your Test Settings Page:

1. To listen to each line of text, press the **Down** arrow.
2. To move to the **Looks Good!** and **Back to Login** buttons, press **Tab**.
3. To select **Looks Good!** or **Back to Login**, press **Enter**.

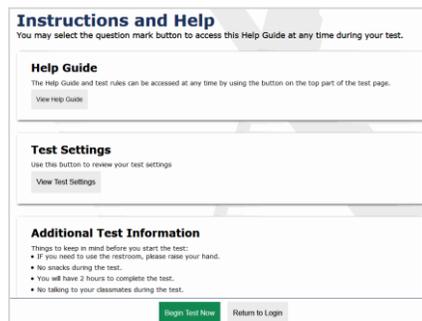
Figure 13. Your Test Settings Page



Instructions and Help Page:

1. To open the Help Guide, press **Tab** to navigate to the **View Help Guide** button and press **Enter**.
 - a. To close the Help Guide, use the **Tab** key to navigate to the **Back** button and press **Enter**.
2. To open the Test Settings window, press **Tab** to navigate to the **View Test Settings** button and press **Enter**.

Figure 14. Instructions and Help Page



- a. To close the Test Settings window, use the **Tab** key to navigate to the **OK** button and press **Enter**.
 3. To move to the **Begin Test Now** and **Return to Login** buttons, press **Tab**.
 4. To select to the **Begin Test Now** or **Return to Login** button, press **Enter**.
-

Navigating Within the Test

This section provides instructions about how students navigate a test page.

The first time the test loads, JAWS may start reading everything until the student stops it. However, on the next test page, the focus will be on the first question on the page.

About Test Elements

A test page has up to three primary landmark regions: the Banner region, the Navigation and Test Tools region, and the Test Content region. To navigate between these landmarks using JAWS, press **R**.

- **Banner Region:** The banner contains the test information row. This row displays the current question numbers, test name, student name, test settings button, pause button, and help button.
- **Navigation and Test Tools Region:** This region displays the navigation and tool buttons.
- **Test Content Region:** This region consists of the *Stimulus* section and the *Question* section:
 - **Stimulus Section:** This section contains the following elements:
 - Stimulus title
 - Stimulus context menu
 - Stimulus content
 - **Question Section:** Each question contains the following elements:
 - Question number
 - Question labels
 - Question context menu
 - Question stem

- Response area

JAWS Keyboard Commands

Students can use the following keyboard commands to navigate within a test page. Please note that this is a subset of all available JAWS commands.

Action	Keyboard Command
Navigate to the next landmark element on the page.	R
Move to the next line on the page.	Down Arrow
Move to the previous line on the page.	Up Arrow
Move to the next component on the page. In general, the following test elements are components: <ul style="list-style-type: none"> • Question number (and associated stem text) • Question context menu • Response options • Navigation and tool buttons 	Tab
Move to the previous component on the page.	Shift + Tab
Jump to the next heading on the page. In general, the following test components are defined with a heading: <ul style="list-style-type: none"> • Test name (H1) • Student name (H2) • Passage title (H3) • Question number (H3) On test pages that have multiple questions, students can jump directly from one question to the next. To do so, press H and then press the Down arrow twice. The question stem is read aloud.	H
Jump to the previous header on the page.	Shift + H
Select an option or button.	Enter
Read everything on the page (from your current place on the page).	Insert + Down arrow
Stop JAWS from reading.	Ctrl or Space bar



Alert: If JAWS enters Forms Mode, these keyboard commands may not work. In order to exit Forms Mode, press **NUM PAD PLUS**.

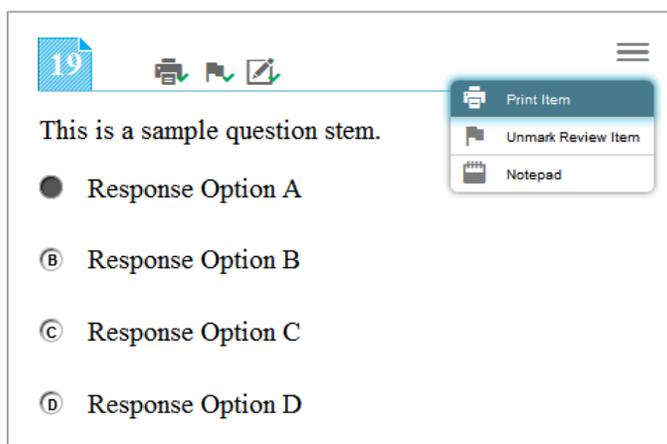
Opening a Context Menu

The first question or stimulus on a test page is automatically in focus. The instructions in this section assume the student wants to open the context menu for the in-focus landmark element on the test page and has not navigated away from that element.



Note: When streamlined mode is enabled, students cannot use the right-click functionality to access the context menu. Instead, they should follow the instructions in this section.

Figure 15. Question Context Menu



To open the context menu for a stimulus or question:

1. Do one of the following:
 - If you are opening the context menu for a stimulus, ensure the focus is on the stimulus.
 - If you are opening the context menu for a question, ensure the focus is on the question.
2. To navigate directly to the context menu button, press **Tab** twice. JAWS reads aloud “Menu button.”
3. Press **Enter**. The context menu opens and displays the list of available menu options. JAWS reads aloud the first option in the menu.
4. To move up and down the list, press the **Up** and **Down** arrow keys. JAWS automatically reads aloud each option.
5. To select a menu option, press **Space**.
 - a. To exit the menu without making a selection, press **Esc**. JAWS returns focus to the context menu button.

About Question Labels

After students use a context menu tool for a given question, a label for that tool appears next to the question number (see [Figure 15](#)). When students navigate to a question with labels, they can press **Tab** to navigate to each label, which JAWS reads aloud.

- When a question is marked for review, JAWS reads “Marked for review” for the question label (📌).
- When a question has been printed, JAWS reads “Printed” for the question label (🖨️).
- When the student has entered a note for a question, JAWS reads “Notes” for the question label (📝).

Responding to Questions

This section provides basic guidance for responding to question types that may appear on tests. Students should review questions via an RBD or printout from a Braille embosser before responding to questions.



Note: The instructions in this section assume that the question does not display any question labels. If the student has used a context menu tool for a question, the student must press **Tab** an additional time for each question label that appears.

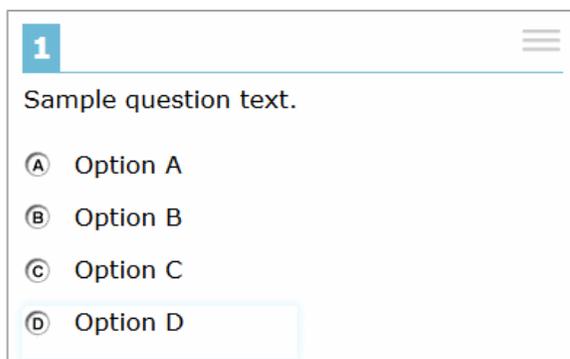
Multiple-Choice and Multi-Select

The procedures for responding to Multiple-Choice and Multi-Select questions are similar.

- Multiple-Choice questions require you to select one response option from a group of options. The response area displays several response options as radio buttons.
- Multi-Select questions require you to select one or more response options from a group of options. The response area displays several response options as checkboxes.

1. After listening to the question text, press **Tab** twice. JAWS reads aloud the option’s text. If the option is an image, JAWS reads the text description associated with the image.
2. To navigate between each answer option, use the **Tab** and **Shift + Tab** commands (or use the **Up** and **Down** arrow keys). JAWS reads aloud the text for the option in focus.

Figure 16. Multiple Choice Question



3. To select the response option in focus as your response, press **Space**. The answer option is selected and JAWS reads “Space.”



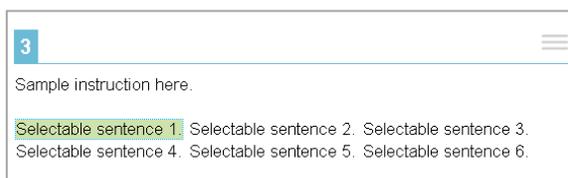
Note: If the student uses the Strikethrough tool to strike out an answer option in a Multiple-Choice or Multi-Select question, JAWS reads “Option is struck-through” when the student navigates to that answer option.

Hot Text

Hot Text questions require you to select at least one word, phrase, or sentence. For these question types, it is critical to follow the instructions provided in the question. Each selectable text area is pre-defined. Selecting a phrase or sentence automatically marks all the words in that text area as selected.

1. After listening to the question text, press **Tab** twice. JAWS reads aloud the text that is in focus.
2. To navigate between each selectable text area, use the **Tab** and **Shift + Tab** commands. JAWS will read aloud the selectable text.

Figure 17. Hot Text Question



3. To choose a selectable text area in focus as your response, press **Enter**. JAWS announces the text is selected.

Edit Task

Edit Task questions require you to replace an incorrect selectable word or phrase in a reading excerpt. For these question types, it is critical to follow the instructions provided in the question. Some edit task questions require you to enter the response into a text box. Some edit task questions require you to select a response from a drop-down list. Each selectable text area is pre-defined.

Some Edit Task questions require students to make changes that are punctuation-based. For these Edit Task questions, JAWS needs to read in character mode.



Tip: AIR strongly recommends that students read through an entire Edit Task question before responding. Students can listen to the question as well as read it via an RBD or printout from an embosser.

1. Use the **Down** arrow to read through each line of text. If a line of text has a selectable word or phrase, JAWS reads “clickable” after the word or phrase.
2. Navigate to each selectable text field in the question by doing one of the following:
 - Return to the beginning of the question.
 - Press **Shift + H**.
 - Press **Tab** to go to the first selectable text field.
 - Move backwards through the selectable text fields in the question.

- Press **Shift + Tab**.
3. When the selectable text is in focus, press **Space**. This opens the edit menu. JAWS reads “Edit tools dialog” and provides additional instructions.
 - Text box: Type in the replacement word or phrase.
 - Drop-down list: Use the **Up** and **Down** arrow keys to move between options in the list. JAWS will read aloud each option. To select an option, press **Enter**.

Figure 18. Edit Task Question

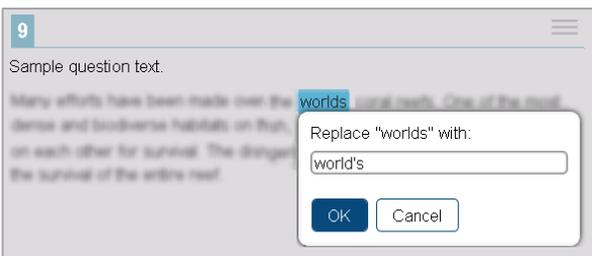
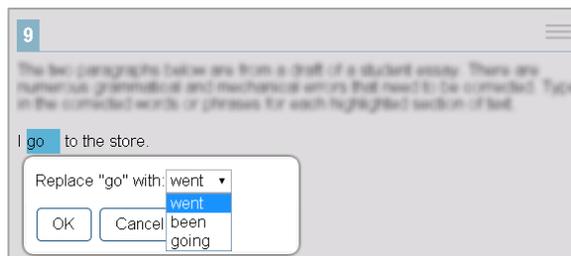


Figure 19. Edit Task with Choice Question



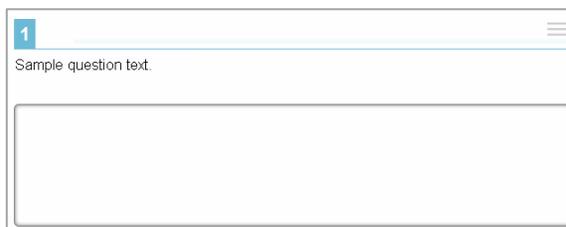
4. Press **Tab** to navigate to the **OK** button and press **Enter** to close the edit menu.

Text Response

Text Response questions require you to enter text in a text box. You may be asked to write a sentence or paragraph. Some Text Response questions include a row of text formatting buttons. However, these formatting options are not available to students testing with Braille.

1. Read the question and then use the **Tab** command to move to the text box. JAWS beeps and reads “Edit, type in text.”
2. Enter your response. When you are done, press **Tab** to navigate from the text box to the next question on the page. JAWS beeps again in a different tone upon leaving the text box.

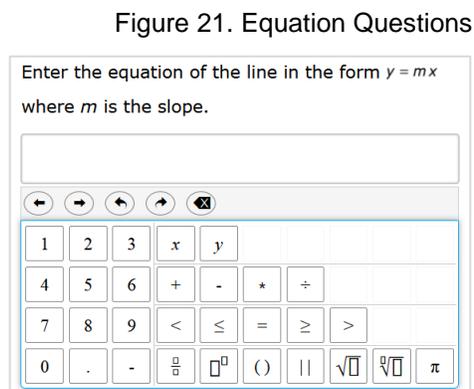
Figure 20. Text Response Question



Equation

Equation questions require you to enter a math equation or expression in a text field using an on-screen keypad.

1. To navigate between the keypad buttons, press **Tab** or **Shift + Tab**. JAWS reads aloud the character or action for each button.
2. To enter a character in the text field or perform an action from the keypad toolbar, press **Enter**. You can also press the corresponding key on your keyboard, if available.

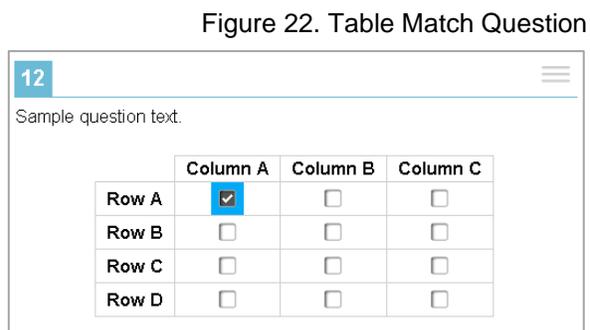


3. *Optional:* To add special characters to the text field, press **Alt + 7** with the focus on the text field. A pop-up window opens, with a drop-down list of the available characters. To move between the options in this list, use the arrow keys. JAWS reads the name of each special character. To insert the selected character, press **Enter**.

Table Match

Table Match questions require you to mark at least one check box in the cells of a table consisting of multiple rows and columns. The table row heading and column heading are not selectable.

1. After listening to the question text, press **Tab** twice. This takes you to the first cell containing a check box. JAWS reads aloud the column and row names for that cell.
2. To navigate to each cell that has a check box, press **Tab**. JAWS reads aloud the column name and row name for each cell.
3. To mark a check box, press **Space**.



Appendix A. User Support

If this document does not answer your questions, please contact the Rhode Island Next Generation Science Assessment Help Desk.

The Help Desk will be open Monday–Friday from 7:00 a.m. to 6:00 p.m. ET (except holidays).

**Rhode Island Next Generation Science
Assessment Help Desk**

Toll-Free Phone Support: 1-866-757-9437

Email Support: rihelpdesk@air.org

Appendix B. Change Log

Change	Section	Date