



FLORIDA DEPARTMENT OF  
**EDUCATION**  
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# Assistive Technology Manual for Windows & macOS

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## Overview of Testing with Assistive Technology

This manual provides an overview of the embedded assistive technology tools that can be used to help students with accessibility needs complete online tests in the Test Delivery System (TDS). It includes lists of supported devices and applications for each type of assistive technology that students may need, as well as setup instructions for the assistive technologies that require additional configuration to work with TDS.

- Embedded assistive technology tools include the built-in test tools in TDS, such as the text-to-speech and speech-to-text tools. These tools can be accessed without third-party software or hardware and do not require Permissive Mode to be turned on in TDS.
  - The embedded assistive text-to-speech, speech-to-text, and zoom tools in TDS are available on both desktop and mobile devices.

Students who use assistive technology tools to interact with a standard web browser should be able to use those same tools with TDS unless they are web-based applications or browser extensions. The best way to test compatibility for tools is to take a practice test in the [Secure Browser](#) with those tools turned on. If they do not work, see the additional configuration instructions in this manual as required. If you still have questions about the assistive technology covered in this guide, please contact the Help Desk.

For more information about taking practice tests, see the [Test Administrator User Guide](#).

The manual includes the following sections:

- [Testing with Text-to-Speech](#)
- [Testing with Speech-to-Text](#)

## Using Permissive Mode with Assistive Technology

Permissive Mode is a TDS accommodation that allows students to use non-embedded assistive technology to complete tests in the Secure Browser. It must be turned on for any students testing with third-party assistive technology tools. When Permissive Mode is turned on, the Secure Browser's security settings will be partially lowered to allow students to use tools that would otherwise be blocked.

Permissive Mode is available for computers running supported desktop Windows and macOS operating systems only. Permissive Mode on macOS devices is supported only with Secure Browser version 16. When using Windows devices, the task bar remains on-screen throughout the test after enabling accessibility software. However, forbidden applications are still prohibited.

Permissive Mode activates when students are approved for testing in TDS. The student's assistive technology should already be set up for use with TDS when they begin testing with Permissive Mode.

When Permissive Mode is turned on, standard keyboard commands in the Secure Browser will be disabled to accommodate any potential keyboard commands associated with the assistive technology the student may be using. For information about standard keyboard commands in the Secure Browser, see the [Test Administrator User Guide](#).

**Note:** Some of the tools covered in this document may include prohibited features that students can access, even when Permissive Mode is enabled. For such tools, it is recommended that Test Administrators monitor students while testing to ensure they do not use any prohibited features.

## How to Use Assistive Technology with Permissive Mode on Windows

Students can follow the instructions in this section to use assistive technology alongside the Secure Browser with all supported Windows operating systems.


1. Open the required accessibility software on the student's testing device.
2. Open the Secure Browser. Begin the standard sign-in process up to the proctor approval step.
3. When a student is approved for testing, the Secure Browser allows the operating system's menu and task bar to appear.
  - **Windows:** The Secure Browser resizes, and the taskbar remains visible inside the test in its usual position. Students can press **Alt+Tab** to switch between the Secure Browser and accessibility applications that they are permitted to use in their test session.

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4. The student must immediately switch to the accessibility software that is already open on the computer so that it appears over the Secure Browser. The student cannot click within the Secure Browser until the accessibility software is configured.
  - **Windows:** Click the accessibility software application in the task bar.
5. The student configures the accessibility software settings as needed.
  - If the student needs to test with multiple accessibility applications simultaneously, they should configure all of them during this step.
6. After configuring all the necessary the accessibility software settings, the student returns to the Secure Browser and continues the sign-in process. At this point, the student can no longer switch back to the accessibility software. If changes need to be made to the accessibility software, the student must sign out and then sign in again.

## How to Use Assistive Technology with Permissive Mode on macOS 13

The Secure Browser 16 for macOS 13 requires students to launch approved accessibility software after logging in to the test.

1. Open the required accessibility software on the student's testing device and configure the accessibility software settings as needed.
2. Open the Secure Browser and follow the standard sign-in process.
3. On the first page of the test, select **Applications**  in the global menu. From the **App Launcher** window that pops up, select the appropriate assistive technology software, and click **OK**.
4. Return to the Secure Browser and continue testing.
  - **Note:** Students should not close the assistive technology application while the Secure Browser is still open, as they may not be able to relaunch it. If the student accidentally closes the assistive technology application, they must sign out and then sign in again.

## Testing with Text-to-Speech

Text-to-Speech (TTS) tools read aloud text that appears on the screen for students who may have reading impairments. TDS includes embedded TTS tools that can be turned on for students with the appropriate accommodation settings in TIDE. In order for students to test with TTS tools, a supported voice pack will need to be installed on their device before testing begins (if the device does not already include a built-in voice pack). Students testing with TTS should also have a supported headset or headphones.

TTS is available on all operating systems supported by TDS (for a full list of supported operating systems, see the [Supported Devices](#) page of the Florida Portal). However, TTS tracking does not function correctly on Linux devices. If students require the use of this accommodation (TTS with tracking), they must use a supported operating system.

Text-to-speech in Windows, macOS, and iPads includes a feature that allows students to pause and then resume TTS in the middle of a passage. On Chromebooks, however, students should highlight the desired text to be read as the pause feature does not allow students to pause and resume reading again.

[Table 1](#) lists the voice packs supported for students testing with TTS. Students can verify that TTS works on their computers by logging in to a practice test session and selecting a test for which TTS is available. Students using TTS for the practice tests must log in using a supported Secure Browser.

Table 1. Technology Requirements for Students Testing with TTS

Technology Type	Product
Supported Voice Packs	<ul style="list-style-type: none"> <li>Windows built-in voice packs</li> <li>macOS built-in voice packs</li> <li>iPadOS built-in voice packs</li> <li>Chromebook built-in voice packs</li> <li>Heather Infovox iVox HQ (macOS only)</li> <li>Rosa Infovox iVox HQ (macOS only)</li> </ul>

**Note:** CAI strongly encourages schools to test the TTS settings before students take operational tests. You can check these settings through the diagnostic page. From the student practice test login screen, click **Run Diagnostics**, and then click **Text-to-Speech Check**.

### Voice Pack Selection on Mobile Versions of Secure Browsers

The Mobile Secure Browser uses either the device's native voice pack or a voice pack embedded in the Secure Browser. Additional voice packs downloaded to a mobile device are not recognized by the Mobile Secure Browser.

Table 2. Screen Readers Supported for Student Computers

Screen Reader	System Requirements	Additional Details
<a href="#">JAWS–Student</a> <ul style="list-style-type: none"> <li>Supported Versions: 2021, 2022, 2023</li> </ul>	<ul style="list-style-type: none"> <li><b>Operating Systems:</b> Windows 8.1, 10, 11</li> <li><b>Minimum Requirements:</b> 2.0 GHz Processor, 8 GB RAM</li> </ul>	<ul style="list-style-type: none"> <li>Requires additional setup before use with TDS (see <a href="#">configuration instructions</a>).</li> <li>Test Presentation setting must be set to braille, even if the student is not a braille user.</li> </ul>

## Configuring JAWS Screen Readers on Student Computers Before Testing Begins

This section includes instructions for the additional JAWS configuration steps that Technology Coordinators must follow before students use JAWS for online testing. To ensure JAWS is properly configured, students should take practice tests using JAWS before taking operational tests.

The configuration instructions in this section apply to JAWS 2021, JAWS 2022, and JAWS 2023, as well as Fusion.

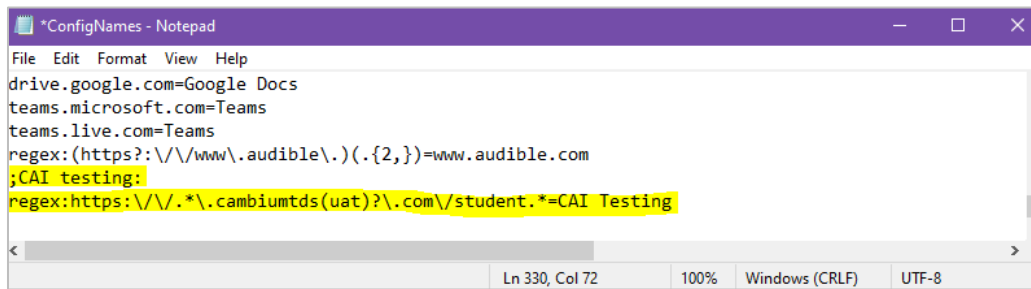
### Configuring JAWS to Recognize the Secure Browser

You must edit the JAWS configuration file so that the software recognizes the Secure Browser.

- To modify the configuration file, 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. The examples below are for JAWS 2020 installed to the default location. If your version is installed to a different location, navigate to the appropriate directory.
  - Required Folder:** Start > All Programs > JAWS 2021 > Explore JAWS > Explore Shared Settings
  - Optional Folder:** Start > All Programs > JAWS 2021 > Explore JAWS > Explore My Settings
- In the **ConfigNames** file, locate the line of text containing *firefox:3=firefox*. At the end of this line, press **Enter** and type *FLSecureBrowser15.0=firefox*
- At the bottom of the **ConfigNames** file, do one of the following:
  - For JAWS 2022:** Update the URL in the *regex:* line below the *;CAI testing:* line so that it reads as *regex:https://.\*\.cambiumtds(uat)?\.com/student.\*=CAI Testing*
  - For JAWS 2021:** After the last line of the file, press **Enter** and type *;CAI testing:* and then press **Enter** again and type *regex:https://.\*\.cambiumtds(uat)?\.com/student.\*=CAI Testing*

The end of the **ConfigNames** file should match the highlighted section in [Figure 1](#).

Figure 1. JAWS ConfigNames File—regex line



4. Save the file.
  - a. If you receive an error that you don't have permission to save the .ini file to this location, save the file as `ConfigNames.ini` to your desktop. Then copy the updated .ini file to the folder containing the original .ini file referenced in step 5.

### Registering AccessibleHandler.dll

To ensure that JAWS works properly with the Secure Browser, you should register `AccessibleHandler.dll` on the student's testing device. These steps should be performed for all supported versions of JAWS.

1. From the **Start** menu, search for `File Explorer`, then press **Enter** on the keyboard. After the *File Explorer* or *Home* window populates, navigate to the left-hand panel, then select **Local Disk (C:)** or **Windows (C:)** under *This PC*.
2. Open the **Program Files** folder, then locate the downloaded Secure Browser folder: `FLSecureBrowser`.
3. Find the *Windows Batch File Type* with the name `RegisterAccessibilityLibs`.
4. Right click on the `RegisterAccessibilityLibs.bat` file and select "Run as Administrator." You may be prompted to choose between *Yes* and *No* in a pop-up box, choose **Yes**.
5. A command prompt window appears briefly with a message confirming successful registration.
6. A message appears indicating that the action was successful. Choose **OK** on this prompt and the command window automatically closes.

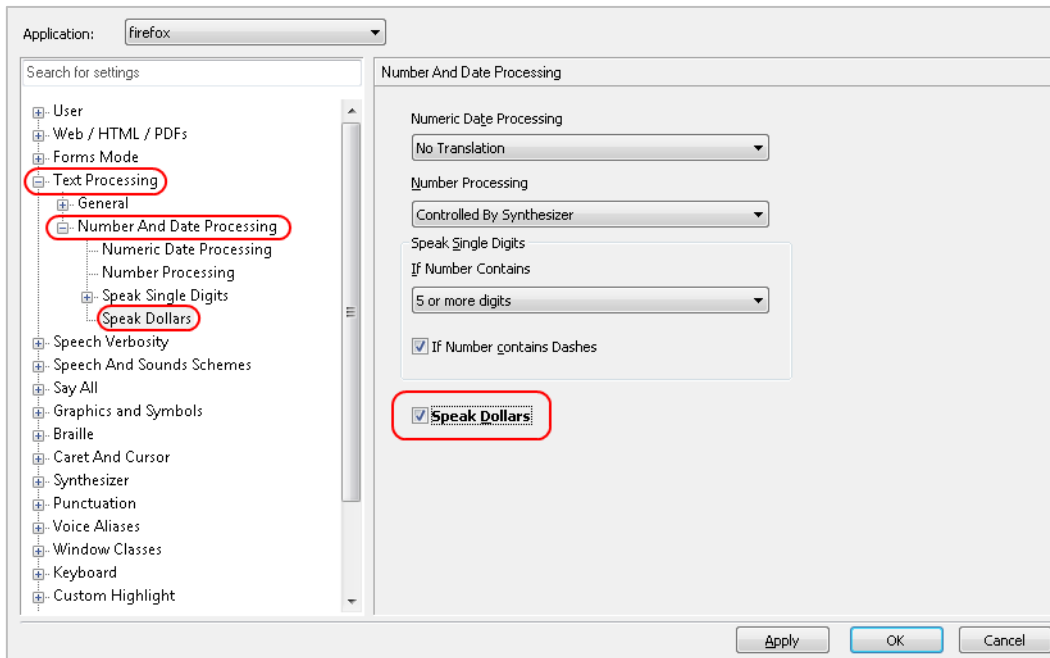
### Configuring JAWS to Speak "Dollars"

You should configure JAWS to correctly speak the dollar symbol (\$) in case it appears in the test content.

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. Select **Speak Dollars**. The *Settings Center* window displays the *Number And Date Processing* options (see [Figure 4](#)).



Figure 4. Number and Date Processing



3. Select the **Speak Dollars** checkbox.
4. Select **Apply**, and then select **OK**.

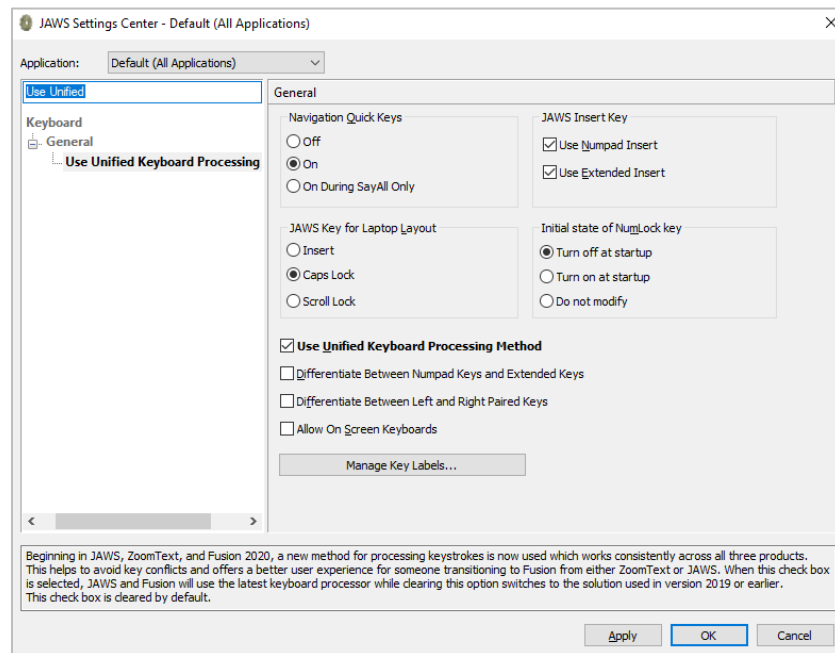
## JAWS Unified Keyboard Settings

JAWS includes a unified keyboard setting that allows students to use **Alt+Tab** to return to the Secure Browser when Permissive Mode is turned on.

The unified keyboard setting is turned on by default, but you should still verify it is enabled for students before they begin testing.

4. Open JAWS and navigate to **Utilities > Setting Center**.
5. Search in the **Settings Center** window for “Unified Keyboard” and select the **Use Unified Keyboard Processing Method** checkbox (see [Figure 5](#)).

Figure 5. Use Unified Keyboard Processing Setting

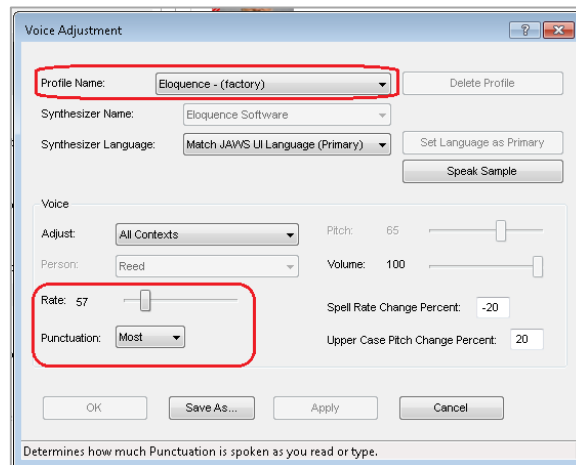


## Optional JAWS Voice Adjustment Settings

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.

1. To adjust JAWS voice settings, open JAWS and go to **Options > Voices > Voice Adjustment**. The **Voice Adjustment** window opens (see [Figure 6](#)).

Figure 6. JAWS Voice Adjustment



2. To adjust the voice profile, in the *Profile* section, select a voice profile from the **Profile Name** drop-down list. Select **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). Select **Apply**.
4. To adjust the punctuation, select the **Punctuation** drop-down list. Select from the following options: **None**, **Some**, **Most**, or **All**. Select **Apply**.
5. When all settings are saved, select **OK**.

## Navigating the Student Testing Site with JAWS

JAWS allows students to use keyboard commands to navigate the Student Testing Site. The actions associated with each JAWS keyboard command depend on the context in which the student presses the key. In other words, the same key may have different effects depending on whether the student is on the sign-in pages, the test pages, or within the items and stimuli of the test pages.

**Note:** The **Tab** key is best used to move among elements such as buttons, text boxes, etc.

Use *Forms Mode* to navigate within an element, such as a listbox (allows multi-selection of options in the list). *Forms Mode* should be activated either automatically when focus is brought to that element using **Tab** or by pressing **Enter** on the element. The arrow keys should then be used. To exit *Forms Mode*, press **Esc** or **NUM PAD PLUS** and use the arrow keys. This allows a page to be read in detail, including plain text such as test questions.

[Table 1](#) provides an overview of how to use JAWS keyboard commands in each context. For students to use these keyboard commands, *Permissive Mode* must be enabled for them in TDS.

**Caution:** If JAWS enters *Forms Mode*, these keyboard commands may not work. To exit *Forms Mode*, press **NUM PAD PLUS** or **Esc**.

Table 1. Overview of JAWS Keyboard Commands in the Student Testing Site

Key	Action
<b>Navigating the Sign-In Pages with JAWS Keyboard Commands</b>	
<b>JAWS modifier key + F10)</b> <b>Space + S</b> (Perkins Braille keyboard)	Returns the focus to the Secure Browser if the student navigates to the JAWS application window while signing in Keyboard layouts may vary by device. Please refer to the manual provided by the device manufacturer for more information.
<b>Tab</b>	Moves the focus to the next field or button on the page
<b>Shift + Tab</b>	Moves the focus to the previous field or button on the page
<b>Down Arrow</b>	Reads the next line on the page
<b>Up Arrow</b>	Reads the previous line on the page
<b>Enter</b>	Selects the button that is currently in focus
<b>Navigating Test Pages with JAWS Keyboard Commands</b>	
<b>R</b>	<p>Navigates to the next landmark region on the test page. A test page has up to three primary landmark regions:</p> <ul style="list-style-type: none"> <li>• <b>Banner Region:</b> 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.</li> <li>• <b>Navigation and Test Tools Region:</b> This region displays the navigation and tool buttons.</li> <li>• <b>Test Content Region:</b> This region consists of the <i>Stimulus</i> section and the <i>Question</i> section: <ul style="list-style-type: none"> <li>▪ <i>Stimulus Section:</i> Contains the stimulus title, stimulus context menu, and stimulus content.</li> <li>▪ <i>Question Section:</i> Contains a question number, question labels (labels that appear when you mark an item for review, print an item, or enter a note for an item), question context menu, question prompt, and the response area.</li> </ul> </li> </ul>

Key	Action
H	<p>Jumps to the next heading on the page.</p> <p>In general, the following test components are defined with a heading:</p> <ul style="list-style-type: none"> <li>• Test name (H1)</li> <li>• Student name (H2)</li> <li>• Passage title (H3)</li> <li>• Question number (H3)</li> </ul> <p>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 prompt is read aloud.</p>
Shift + R	Jumps to the previous region on the page.
Shift + H	Jumps to the previous heading on the page.
Tab	<p>Moves to the next component on the page. In general, the following test elements are components:</p> <ul style="list-style-type: none"> <li>• Navigation and tool buttons</li> <li>• Question number</li> <li>• Context menu</li> <li>• Response options</li> </ul>
Shift + Tab	Moves to the previous component on the page.
Enter	<p>Selects a button or response option or opens a context menu.</p> <p><b>Note:</b> Press the Esc key to exit out of the Multiple Choice response options</p>
Down Arrow	Moves to the next line on the page.
Up Arrow	Moves to the previous line on the page.
JAWS modifier key + Down Arrow	Reads everything on the page (from the current point of focus).
Ctrl	Stops JAWS from reading.
<b>Opening and Using Context Menus with JAWS Keyboard Commands</b>	
Enter	<p>Pressing <b>Enter</b> when JAWS reads “Menu button” will open the context menu. This is the only way to open the context menu when streamlined mode is turned on.</p>

Key	Action
<b>Down Arrow</b>	Moves the focus to the next option in the menu. JAWS will read this option aloud.
<b>Up Arrow</b>	Moves the focus to the previous option in the menu. JAWS will read this option aloud.
<b>Space</b>	Selects the menu option currently in focus.
<b>Esc</b>	Closes the context menu without selecting any options.
<b>Responding to Items with JAWS Keyboard Commands</b>	
<b>Tab</b>	<ul style="list-style-type: none"> <li>• Students can use the <b>Tab</b> key to navigate to the item prompt.</li> <li>• Students can press <b>Tab</b> again to navigate to the response area. They may need to press <b>Tab</b> multiple times depending on the item type and whether any question labels appear for the item.</li> <li>• In the response area for an item, students can press <b>Tab</b> to navigate between each answer option, text box, selectable text field, keypad button, or check box, depending on the item type.</li> </ul>
<b>Shift + Tab</b>	Navigates to the previous answer option, text box, selectable text field, keypad button, or check box, depending on the item type.
<b>Up and Down Arrow Keys</b>	<ul style="list-style-type: none"> <li>• For multiple choice and multi-select items, pressing the arrow keys will move between each answer option.</li> <li>• For edit task choice items, pressing the arrow keys will move between each line of text in the item. After users open an edit menu by pressing <b>Space</b>, the arrow keys can be used to move between the answer options in the drop-down list.</li> </ul>
<b>Space</b>	<ul style="list-style-type: none"> <li>• For multiple choice and multi-select items, pressing <b>Space</b> will select the answer option in focus.</li> <li>• For edit task items, pressing <b>Space</b> will open the edit menu in which students type or select a response.</li> <li>• For table match items, pressing <b>Space</b> will mark the checkbox in focus.</li> </ul>
<b>Enter</b>	<ul style="list-style-type: none"> <li>• For hot text items, pressing <b>Enter</b> will choose the selectable text area in focus as the answer option.</li> <li>• For edit task choice items, pressing <b>Enter</b> will select an answer option from the drop-down list in the edit menu.</li> <li>• For equation items, pressing <b>Enter</b> will select the keypad button in focus.</li> </ul>
<b>Alt + 7</b>	<ul style="list-style-type: none"> <li>• For equation items, pressing <b>Alt + 7</b> will open a popup menu with special characters. Students can use the arrow keys to move between the special characters in the list and then press <b>Enter</b> to insert a special character in the response area.</li> </ul>

Please note that the keypad of the Scientific and Four-Function calculator tool in the Student Testing Site cannot be navigated entirely with the **Tab** key. However, all buttons within the keypad can be navigated or selected using JAWS or Scientific and Four-Function keyboard commands. For a list of Desmos keyboard commands, see <https://www.desmos.com/fourfunctionshortcuts> and <https://www.desmos.com/scientificshortcuts>.

## Testing with Speech-to-Text

Speech-to-text (STT) technology transcribes a student's spoken words into text for item responses in TDS. Students with the appropriate accommodations may use STT assistive technology while taking tests. It is recommended that students use the embedded STT tool in TDS. This embedded tool can be tracked by the Florida Department of Education when gathering data about students' tool use (for more information about the embedded STT tool, see the *Test Administrator User Guide*).

Students using STT technology will need to use a headset while testing. Any wired headset with a 3.5mm or USB connection should be compatible.



## Appendix

The following directions and keyboard commands are recommended for navigating specific sections of the test.

1. To navigate a test page:
  - a. Once the question loads, use H to navigate to the Item number (heading level 2) i.e. '3' (heading level 2)
  - b. Use the down arrow key to navigate to the test question/stimulus
  - c. Use the arrow keys to navigate through the answer choices
  - d. Press space bar to select your answer choice
  - e. To go to the next question, press B until you get to Next button
2. To navigate to the Items Summary Drop Down List ('items button' – which is a list of answered items, flagged items, and the next item to be answered).
  - a. Press B until you get to Items button
  - b. Use up/down arrows to navigate within the list
  - c. Press Esc to exit the Items button and H to move focus away from the Items button.
3. To navigate to the Item # Menu button - which has options to mark for review, strikethrough or highlight (text must be selected for highlighting option to appear).
  - a. Press H to get to the Item #
  - b. Press down arrow to navigate to the Item # Menu (button)
  - c. Press space bar to activate the button
  - d. Press arrow keys to navigate the options and space bar to select an option
  - e. Press Esc to exit the Item # Menu (button)
  - f. Then use down arrow keys to navigate to question/stimulus and answer choices

**Caution:** If JAWS enters *Forms Mode* (indicated by a beep), these keyboard commands may not work. To exit *Forms Mode*, press **NUM PAD PLUS** or **Esc**.

## Help Desk

If this document does not answer your questions, please contact the Florida Help Desk.

The Help Desk will be open **Monday–Friday from 7:00 a.m. to 8:30 p.m. Eastern Time** (except holidays or as otherwise indicated on the Florida Statewide Assessments Portal).

**Toll-Free Phone Support: 1-866-815-7246**

**Email Support: [FloridaHelpDesk@CambiumAssessment.com](mailto:FloridaHelpDesk@CambiumAssessment.com)**

To help us effectively assist you with your issue or question, please be ready to provide the Help Desk with detailed information that may include the following:

- Device, operating system, and browser version information
- Any error messages and codes that appeared, if applicable
- Information about your network configuration:
  - Secure browser installation (to individual machines or network)
  - Wired or wireless Internet network setup.

## Change Log

Location	Change	Date
Using Permissive Mode with Assistive Technology	Removed Secure Browser 12.5 and 15.5; replaced with 16	
How to Use Assistive Technology with Permissive Mode on Windows	Removed macOS10.15 (deprecated)	
Voice Pack Selection on Mobile Versions of Secure Browsers	Updated JAWS versions	9/6/23
Additional Configuration for JAWS 2020	Removed section	
Table 1. Overview of JAWS Keyboard Commands in the Student Testing Site	Updated Responding to Items with JAWS Keyboard Commands > Tab row	
Configuring JAWS Screen Readers on Student Computers Before Testing Begins	Changed sidebar text to “Testing with Screen Readers” from Page 7-15	9/11/23
Navigating the Student Testing Site with JAWS	Removed associated text prompt from Tab section under “Question Number”	9/11/23
Appendix	Added appendix to provide additional directions and keyboard commands that are recommended for navigating specific sections of the test when using JAWS.	10/26/2023

