



Guidelines for using Assistive Technology as an MCAS Test Accommodation

These guidelines will assist schools in determining how specific assistive technology (AT) applications may be used by students with disabilities for computer-based MCAS testing. Assistive technology includes applications such as text-to-speech, word prediction, speech-to-text, screen readers (for students with visual impairments), screen magnification, as well as devices like adaptive keyboards, mouse, monitors, and switch interfaces.

Accommodations that require Assistive Technology (AT) devices, applications, and adaptive hardware must be listed in the student's IEP or 504 plan before they may be provided to the student for MCAS testing.

Assistive Technology can be sorted into four categories for the purpose of MCAS testing:

1. Accessibility features (tools and supports) that are **embedded** in the TestNav8 computer-based testing platform, including “**web extensions**” to access speech-to-text and word prediction applications.
2. AT that is **external** to TestNav8, but is **compatible** with the test platform and can be used on the same computer used for computer-based testing.
3. AT that **may be compatible** with TestNav8 but must be tested by the school prior to MCAS testing to confirm that the technology is compatible.
4. AT that is known to be **incompatible** with TestNav 8 (i.e., **cannot** be used with TestNav8) and therefore must be used on a **separate device** at an adjacent computer station during testing.

All MCAS testing must be completed using the TestNav application (app) which may or may not work as expected with the student's own AT device or program. Therefore, all external AT devices should be tested by the school *before* MCAS testing using the same computer that will be used by the student during testing (see Category Two below). Trying out the student's own AT device with TestNav before MCAS testing is strongly encouraged and is described in Appendix A.

Category One: Accessibility features already included in TestNav8

Many universal accessibility features and accommodations are embedded within the TestNav8 testing platform that can be used by any student taking the computer-based test. Some features must be selected in advance in the Student Registration/Personal Needs Profile (SR/PNP) within PearsonAccess^{next} (marked by an **asterisk** below) while others are available automatically to all students.

Accessibility Features available to all students in TestNav8:

- Screen magnification
- Alternative background and font color (color contrast)*
- Answer masking*Line reader tool, which hides portions of the text not being read by the student

- Calculator (for the calculator session of the Mathematics tests)
- Item flag/bookmark/highlighting
- Notepad (only available for ELA tests)
- Spell-checker on the grades 5 and 8 STE and High School Biology
- Highlighter tool
- Enlarged cursor/mouse pointer, which allows students to use a medium, large, or extra-large and/or alternate colored cursor/mouse pointer*

* Must be selected ahead of time in the Student Registration/Personal Needs Profile (SR/PNP) Students should view the TestNav8 **tutorial** and participate in MCAS **practice tests** to become familiar with these tools and features prior to testing. These are available at mcas.pearsonsupport.com/student/.

Accommodations for students with disabilities who have one or more of these listed in their IEP or 504 plan. The following are embedded in TestNav8, but must be selected in advance in the Student Registration/Personal Needs Profile (SR/PNP):

- Text-to-speech, for which text is read aloud to a student using an electronic voice, highlighting each word as it is read. This is a standard accommodation for Mathematics and STE tests, but is a “special access” accommodation for ELA.
- Spell-checker on the ELA tests, for students who have this “special access” accommodation listed in their IEP or 504 plan
- Calculator, for use on the non-calculator session of the Mathematics test for students who have this “special access” accommodation listed in their IEP or 504 plan
- “Web extensions” described below for students who have speech-to-text and/or word prediction listed in their IEP or 504 plan. It is *not* necessary for Co:Writer Universal and/or Read&Write to be installed on a student’s browser or computer. “Web extensions” are supported on Windows, MacOS, iOS (iPad) and ChromeOS only; Android do NOT currently support use of the TestNav “web extensions.”

Web Extension	Expected user experience
<p>Co:Writer Universal: Word Prediction or Speech-to-Text tools</p>	<ul style="list-style-type: none"> ● <u>After logging into the TestNav app</u>, students can access the Co:Writer Universal feature by selecting the Co:Writer “web extension” (explained in Appendix B). ● The “web extensions” are supported on Windows, Mac, iOS (iPad) and Chromebook operating systems. They are NOT currently supported on Androids. Android users should refer to Categories 2, 3, and 4 in this document for how AT may be used. ● The “web extensions” <i>will</i> work as intended for all ELA tests. ● The “web extensions” will NOT function as intended for open response test questions on all <u>mathematics</u> tests and the high school <u>Introductory Physics</u> test, due to conflicting requirements for using the Equation Editor on constructed responses.

Web Extension	Expected user experience
	<p>Therefore, “web extensions” will not be available on those tests. Students may instead need a scribe or an external speech-to-text or word prediction device for the mathematics and the Introductory Physics tests.</p> <ul style="list-style-type: none"> • Word prediction and speech-to-text are standard accommodations for STE tests but are considered “special access” accommodations for ELA. Please be aware of additional eligibility requirements for the use of “special access” accommodations. • See detailed directions for accessing “web extensions” in Appendix B. • “Web Extensions” must be designated in the student’s SR/PNP for the Co:Writer or Read&Write options to appear on the student’s computer-based test. Do not order the “AT” test form for this accommodation. • The student should attempt the practice test prior to actual testing using this accommodation.
<p>Read&Write: Word Prediction or Speech-to-Text tools</p>	<ul style="list-style-type: none"> • <u>After logging into the TestNav app</u>, students can access the Read&Write Universal features by selecting the Read&Write web extension (explained in Appendix B.). • The “web extensions” are supported on Windows, Mac, iOS (iPad) and Chromebook operating systems. They are NOT currently supported on Androids. Android users will need to refer to Categories 2, 3, and 4 for how AT may be used. • The “web extensions” <i>will</i> work as intended for all ELA tests. • The “web extensions” will NOT function for open response test questions on all <u>mathematics</u> tests and the high school <u>Introductory Physics</u> test, due to conflicting requirements for using the Equation Editor on constructed responses. Therefore, “web extensions” will not be available on those tests. Students may instead need a scribe or an external speech-to-text or word prediction device for the mathematics and the Introductory Physics tests. • Word prediction and speech-to-text are standard accommodations for STE tests but are considered “special access” accommodations for the ELA test. Please be aware of additional eligibility requirements for the use of “special access” accommodations. • See detailed directions for accessing this web extension in Appendix B.

Web Extension	Expected user experience
	<ul style="list-style-type: none"> • “Web Extensions” must be designated in the student’s SR/PNP for the Co:Writer or Read&Write options to appear on the student’s computer-based test. Do not order the “AT” test form for this accommodation. • The student should attempt the practice test prior to actual testing using this accommodation

Category Two: Assistive Technology Already Confirmed as Compatible with TestNav8

This category includes assistive technology used by the student that is known to be compatible with TestNav8 for MCAS testing and can run on the same computer at the same time as the MCAS test. **If the assistive technology appears on the list below, its compatibility has been confirmed for MCAS testing with TestNav8.**

If any of the assistive technologies listed below are listed in the student’s IEP or 504 plan, and the student plans to use it during MCAS testing, then the appropriate assistive technology program(s) must be installed on the student’s device (e.g., laptop, desktop, etc.) by the district.

Assistive Technology	Expected user experience
Jaws 2018, 2019 (screen reader)	Students able to use as expected.
NVDA 2020.1 (screen reader)	Students are unable to change user settings in NVDA once form is loaded but user experience is expected to be positive.
Dragon Professional 14 (Speech-to-text)	Students able to use as expected.
ZoomText 2018 (screen magnification)	Student can use pre-set features during testing. Students cannot make adjustments during testing with the exception of magnification levels that can be increased using keyboard commands.
Fusion (Combination JAWS & ZoomText) 2020	<p>Screen reader (JAWS) is able to be used as expected.</p> <p>ZoomText 2020 pre-set features can be used during testing. Students cannot make adjustments during testing with the exception of magnification levels that can be increased using keyboard commands.</p>

Hardware-based technology (special equipment used with the computer, such as alternate keyboards or mouse)	Assistive devices that are hardware based should work with the TestNav app.
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Either the “Assistive Technology” (AT) or the “Screen Reader” form of the test must be pre-selected, as appropriate, in the Student Registration/Personal Needs Profile (SR/PNP) so the correct accommodated test edition of the computer-based test can be made available to the student that allows activation of the compatible software or hardware.

Category Three: Assistive Technology that may be compatible with TestNav8, but must be tested by the school to determine its compatibility

This category includes assistive technology used by the student that is not listed in the table above but *may* be compatible with TestNav8 for MCAS testing. Schools and districts must verify that the assistive technology works as expected with TestNav8 prior to actual testing.

The process for determining whether a specific AT program is compatible can be performed prior to testing on the [MCAS Training Site](#) using the step-by-step directions shown in **Appendix A**. School staff should conduct this check using the same device the student will use for testing.

Once the application is tested and found to be *compatible*, the student will be able to access and use his or her AT software and/or hardware on the same computer on which the computer-based test is taken.

If the technology is tested and found to be *incompatible*, see Category Four below for instructions on using the technology at a separate computer station.

Category Four: Assistive Technology confirmed as requiring a separate computer for use with TestNav8

This category includes assistive technologies that *cannot* be used on the same computer as the one used by the student to take the test (i.e., cannot interact directly with TestNav8) and therefore must be accessed by the student using a separate **external** (i.e., stand-alone) **computer**. In this case, an adult test administrator must assist the student to transition between the external device used for the student’s AT and the computer used by the student for the computer-based or, if applicable, paper-based test. All responses generated using an external assistive technology device must be transcribed verbatim by a test administrator (or the student) onto the student’s computer-based test or into the student’s test/answer booklet.

“Stand-alone” AT programs are prohibited for MCAS testing if they provide coaching or assistance to the student or allow a student to access the internet. Contact the Department of Elementary and Secondary Education at mcas@doe.mass.edu for approval to use “stand-alone” AT devices or programs and for specific test administration instructions.

Do not select the “Assistive Technology” form in the SR/PNP if the student will use “stand-alone” external assistive technology, since a special form of the test is not required. Programs that have been tested and confirmed as **unable to interact directly** with TestNav8 and therefore will require a stand-alone external computer station, are listed on the following table.

Assistive Technology	Expected user experience
Chrome and other Web Extensions	No web extensions other than the Co:Writer Universal and Read&Write described in Category One will work with the TestNav application.
Other proprietary software not previously mentioned	It is not likely that any other proprietary software programs, applications, or extensions will work with TestNav.

APPENDIX A

Guide for Checking the Compatibility and Proper Operation of Assistive Technology Prior to MCAS Testing

THE INFORMATION BELOW WILL GUIDE SCHOOLS IN DETERMINING WHETHER AN ASSISTIVE TECHNOLOGY APPLICATION AND/OR HARDWARE WILL OPERATE CONCURRENTLY WITH TESTNAV8. ONE GRADE LEVEL AND SUBJECT TEST IS AVAILABLE ON THE [PEARSONACCESS^{NEXT} TRAINING SITE](#) ON WHICH TO PERFORM THIS CHECK. IT IS RECOMMENDED THAT THIS CHECK BE PERFORMED BY THE SCHOOL OR DISTRICT ON THE STUDENTS TESTING DEVICE, IF POSSIBLE.

Step 1: Download the TestNav8 app to the student’s computer. The TestNav app download can be found in various app stores or at <https://download.testnav.com/#>.

Step 2: Sign in to the MCAS PearsonAccess^{next} Training Site.

- Log in to the MCAS PearsonAccess^{next} Training Site at <http://trng-mcas.pearsonaccessnext.com>.
- Select the November 2021 MCAS Retests Administration from the dropdown in the top right-hand corner.

Step 3: Create a student and assign a test.

- Click the **Setup** dropdown and select **Students**.
- Select **Create / Edit Students, Register Students** and **Manage Student Tests** from the **Select Tasks** dropdown and click **Start**.
- Populate the student’s demographic information on the **Create / Edit Students** tab and click **Create**.
- Select the **Register Students** tab at the top of the screen. Click the **Registered** checkbox, choose the **Student Grade**, and click **Save**.
- Select the **Manage Student Test** tab and populate all required fields. You must select either Grade 3 ELA or Grade 3 Math in the test dropdown; ensure that the test format is online; and add the appropriate accommodations. When finished, click **Create**. When you see the green “Success” notification, click **Exit Tasks** in the top right.
 - Note: The Screen-Reader version is only available for the Grade 3 Mathematics test; the Compatible Assistive Technology version is only available for the Grade 3 ELA test. Both accommodations will be available for all grades 3-8 in ELA and Mathematics tests during operational testing.

Step 4: Create a test session and add students.

- Click the **Testing** dropdown and select **Sessions**.
- Select **Create / Edit Sessions** from the **Select Tasks** dropdown and click **Start**.
- Populate all required fields.
 - Note: The Screen-Reader version is only available for the Grade 3 Mathematics test; the Assistive Technology version is only available for the Grade 3 ELA test. You must select the correct test assigned for the accommodated form you plan to use with the student (i.e., Grade 3 Mathematics for Screen Reader)
- In the **Students** box at the bottom, click in the box to select the student created in step 1. Click

Create. Once you see the green “Success” message, click **Exit Tasks** at the top right.

Step 5: Start the test session and access student testing tickets.

- Select **Show Students in Sessions & Control Sessions** from the **Select Tasks** dropdown and select your session name on the left-hand side of the screen.
- Click the **Prepare Session** button and then the **Start** button when it appears.
- Select **Student Testing Tickets** from the **Resources** dropdown. These provide the username and password needed to log into TestNav.

Step 6: Log into the practice test from student’s device.

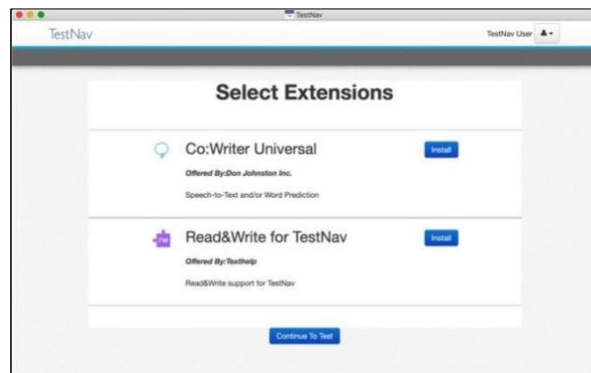
- Use the Student Testing Ticket to log into the practice test.
- Practice using the AT technology to determine if it works as expected within the TestNav app.

APPENDIX B

Guide for Accessing Co:Writer Universal and Read&Write “Web Extensions” in the TestNav Desktop App

Step 1: The student’s SR/PNP must designate that the student will have access to “webextensions” for the specific test (e.g., Grade 5 ELA) in PearsonAccess^{next}.

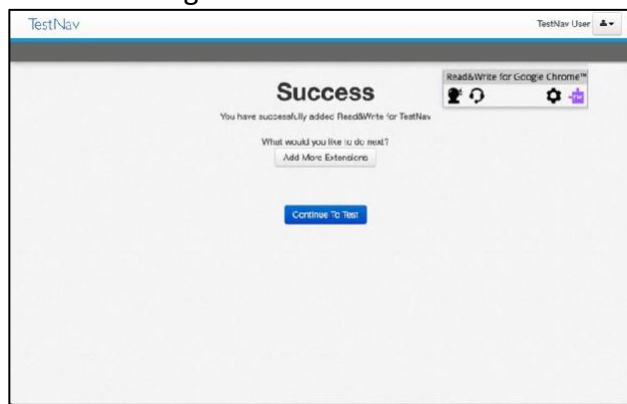
Step 2: After student logs in, the test administrator (or student) must select the appropriate “web extension” to be used during the assessment. (Note: If the screen below does not appear, then “webextensions” was not properly designated in the student’s SR/PNP.) **Do not enable both “web extensions;” only one should be selected.** Both extensions have similar features, but the student should select the “web extension” they are most familiar with. **Do not assign a “web extension” to a student on the day of the test if the student is unfamiliar with its use.**



- Select the “Install” button next to the correct extension

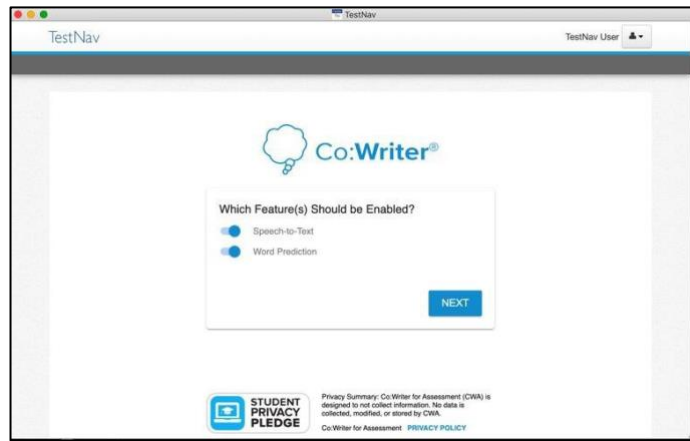
Step 3: If selecting Read&Write, complete the following steps:

- If selecting Read&Write for TestNav, no further action is necessary, the student may continue to the exam using the Read&Write toolbar.



Step 4: If selecting Co:Writer Universal, complete the following steps:

- The administrator (or student) must toggle off Word Prediction or Speech-to-Text if the student is not approved for both features.



- Select the “Next” button.
- The student does *not* need a license to use Co:Writer Universal on the assessment.
 - If the student has an existing license for Co:Writer, they can log into their account and load their previously selected user settings for the assessment.
 - If the student does *not* have a license, or chooses not to load their settings, the test administrator (or student) can “SKIP” this step.
- The student may now continue to the test using the Co:Writer toolbar.

