

System Requirements for Online Testing

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Overview

This document was developed by the American Institutes for Research (AIR) and the Florida Department of Education and contains technology requirements to help Florida districts and schools prepare for online testing using AIR's Test Delivery System. In the 2014–15 school year, the following Florida Standards Assessments (FSA) will be delivered using AIR's system:

- Grades 5–11 ELA
- Grades 5–8 Mathematics
- Algebra 1 EOC
- Geometry EOC
- Algebra 2 EOC

This document includes the following sections:

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Supported Operating Systems and Devices

Desktops, Laptops, and Netbooks

Computers used for testing must meet the specifications for each supported operating system as shown in the table below. To ensure optimal student experiences for online testing, any computer that takes a noticeably long time (for example, 10 seconds or more) to start and run applications should be avoided for use with online testing.

Supported Operating Systems	Requirements for Current Computers	Recommended Specifications for Future Purchases
Windows 7, 8.0, 8.1	1 GHz or faster processor 1 GB RAM or greater memory	Pentium 4 GHz processor 2 GB RAM 80 GB hard drive
Mac OS X (Intel) 10.7, 10.8, 10.9	1 GHz or faster processor 1 GB RAM or greater memory	
Linux Fedora 16, 17, 18, 19, 20 openSUSE 13.1 Red Hat 6.5 Ubuntu 10, 12, 14 (LTS)	1 GHz or faster processor 1 GB RAM or greater memory	

* For additional Linux information, including required libraries, refer to the Technical Specifications Manual for Online Testing (coming soon).

Tablets

While the specifications for computers, laptops, and netbooks are more general, only supported tablets also running a supported operating system are permitted. These supported tablets have been tested for use with AIR's Test Delivery System and may be used for student testing.

Supported Operating Systems	Supported Tablets	Related Requirements
iOS (iPads) 6.0, 6.1 7.0, 7.1	iPad 2 iPad 3 Fourth-generation (Retina Display) iPad Air	Guided Access must be enabled. For more information, refer to the <i>Secure Browser Installation Manual</i> (coming soon).
Android 4.0.4 through 4.4	Google Nexus 10 Motorola Xoom Samsung Galaxy Note (10.1) Samsung Galaxy Tab 2 (10.1)	The secure browser keyboard must be enabled after installing the mobile secure browser. For more information, refer to the <i>Secure Browser Installation Manual</i> (coming soon).

Note: The AIR Test Delivery System is not currently supported on Windows tablets.

Chromebooks

All Chromebooks running a supported Chrome OS may be used for student testing.

Supported Operating Systems	Supported Devices	Related Requirements
Chrome OS 31–35	All Chromebooks	Kiosk mode must be enabled. For more information, refer to the <i>Secure Browser Installation Manual</i> (coming soon).

Secure Browsers for Online Testing

The secure browsers must be downloaded and installed on all computers that will be used for student testing. All secure browsers can be downloaded from the Florida Standards Assessments portal. (The secure browsers will be available for download by Fall 2014.)

Operating Systems	Supported Devices	Secure Browser
Windows	Desktops, laptops, netbooks	Windows Secure Browser*
Mac OS X	Desktops, laptops, netbooks	Mac Secure Browser
Linux	Desktops, laptops, netbooks	Linux Secure Browser
iOS	Supported tablets	Mobile Secure Browser (AIRSecureTest app)
Android	Supported tablets	Mobile Secure Browser (AIRSecureTest app)
Chrome OS	Chromebooks	Mobile Secure Browser (AIRSecureTest kiosk app)

* The Windows secure browser is not supported on tablets.

Supported Web Browsers for Training Tests

The following web browsers are supported for the training tests. Please note that the supported web browser version depends on the operating system being used (e.g., newer versions of Mac OS X do not support earlier versions of Safari.)

Operating Systems	Web Browsers
Windows	Internet Explorer 10 and 11 Google Chrome 31–35 Mozilla Firefox 10–30
Mac OS X	Google Chrome 31–35 Mozilla Firefox 10–30 Safari 4–7*
Linux	Google Chrome 31–35 Mozilla Firefox 10–30
iOS	Safari 6 and 7
Android	Google Chrome 31–35
Chrome OS	Google Chrome 31–35

* While Safari is a supported web browser, it does not render all math symbols well. For this reason, AIR recommends using Firefox or Chrome on computers running a supported Mac OS X system.

Requirements for Appropriate Display

- Screen Dimensions: 10" class or larger (iPads with a 9.5" display are included in this class).
- The minimum required resolution for desktops, laptops, and tablets is 1024 x 768.
- The minimum required resolution for netbooks is 1024 x 600.

Depending on the screen size, students may need to use vertical and/or horizontal scroll bars to view all test-related information. Students may also use the Zoom tool in the online test to enlarge the content on the screen.

Note about brightness/contrast:

Some test items include images that are shaded. Because monitors and screens vary widely, we cannot guarantee that the “default” settings on monitors are optimal. Monitor settings may need to be adjusted if a student says test items with shaded images (e.g., pie charts) are very light or cannot be seen.

Additional Requirements

Keyboards

The use of external keyboards is strongly recommended for tablets that will be used for testing.

Students may use mechanical, manual, and Bluetooth-based keyboards. Some external keyboards have additional “shortcut” buttons that can create security issues. These buttons may allow students to open another application or the tablet's default on-screen keyboard. AIR strongly cautions against using keyboards that have these shortcut buttons.

For Android tablet users:

The Android mobile secure browser requires the secure browser keyboard to be used because the default tablet keyboard includes a row for predictive text. Therefore, any external keyboard that has a shortcut button to open the tablet's default keyboard is not permitted, as this default keyboard will override the mobile secure browser keyboard.

AIR has determined that the following external keyboard contains a shortcut button that opens the default keyboard and should NOT be used with Android tablets:

- EZOWare Slim Full Size Keyboard

Headphones

Some students will need headphones to listen to audio in online assessments.

- Some assessments contain several items that have recorded audio.
- Students with a text-to-speech accommodation can listen to stimuli or test items being read aloud.
- Students with a braille accommodation can use the Job Access with Speech (JAWS[®]) screen reading software.

School Assessment Coordinators should determine how many students will need headphones prior to testing to ensure that there is an adequate supply on hand.



Note: USB headphones are recommended, as they are typically plug-and-play devices.

Text-to-speech requires the use of the secure browser. Students who require text-to-speech for the practice tests should use the secure browser.