

SYSTEM AND BANDWIDTH REQUIREMENTS

System Requirements

For quick reference, here are the minimum system requirements for the MAP[®] Suite. For full installation instructions, see the [MAP Help Center](#).

Student Technology Requirements

Secure testing

As a best practice, use NWEA secure testing browsers and apps for MAP Growth testing. With proper setup, these tools prevent students from accessing other websites.

Device	Operating System	Secure Testing Tool
Windows [®] PC*	Windows 10	NWEA secure browser for PC, 5.4.300.0 minimum New optional version: 5.4.356.0
Mac [®]	macOS [®] 10.15 minimum	NWEA secure browser for Mac, 5.1.4.0 minimum New optional version: 5.4.356.0
Chromebook*	Google Chrome OS [™] 96 minimum	NWEA Secure Testing App, 3.2.0 minimum New optional progressive web app available in June 2022
iPad (not iPad mini)	MAP Growth: iOS 14 minimum MAP Reading Fluency [™] : iOS 14 minimum	MAP Growth: NWEA Secure Testing App, 3.4 minimum MAP Reading Fluency: use Reading Fluency Secure Testing App

*Touch screens are not supported, and Chromebook[™] tablets are only supported with an external keyboard.

Recommended: Set up computer user accounts dedicated to testing, and disable digital assistants (Siri[®] and Cortana[®]), voice dictation, and unsupported screen readers (Chromevox[™] and VoiceOver[™]). See the [System and Technology Guide](#) for details. For students who need screen reader technology, you can use JAWS[®] 2021 or 2022. See [Screen Reader Guidelines](#) for details.

Browser-only testing

In situations where test security is less concerning, students could use a standard browser, following these requirements:

Device	Operating System	Chrome*	Safari®	Firefox	Microsoft Edge*
Windows PC	Windows 10	Version 96 minimum	Not supported	Version 95 minimum	Version 96 minimum
Mac	macOS® 10.15 minimum	Version 96 minimum	Version 14 minimum	Version 95 minimum	Not supported
Chromebook	Google Chrome OS96 minimum	Version 96 minimum	Not supported	Not supported	Not supported
iPad†‡ (grade 2+ testing)	iOS 14 minimum	Not supported	Version 14 minimum	Not supported	Not supported

†iPad testing with MAP Growth K–2: Students must use the NWEA Secure Testing app. See [Secure testing](#) on page 1.

‡iPad testing with MAP Reading Fluency: Students must use the NWEA Secure Testing app. See [Secure testing](#) on page 1.

*MAP Reading Fluency assessments: Only Google Chrome and Microsoft Edge browsers are supported.

Testing sites

For MAP Growth testing, students open either of the following sites:

- <https://test.mapnwea.org>
This site restricts the student's browser to a single tab. Browser settings might need adjustment.
- <https://test.mapnwea.org/#/nopopup>
This site has no browser restrictions. Default browser settings typically work.

For MAP Reading Fluency and MAP Skills testing, students will use a different website:

<https://student.mapnwea.org>

Proctor, Teacher, and Staff Requirements

To administer testing, access reports, and use other administrative features:

- Follow the same requirements as browser-only testing
- Allow cookies and pop-ups—see [Staff Browser and Other Settings](#) on page 5
- iPad limitations for staff:
 - Not fully supported for MAP Growth (have a back-up device)

Hardware Specifications

Computer hardware must meet the minimum requirements specified by the manufacturers of the operating system and browser in use. Hardware that exceeds the minimum requirements is recommended for an optimal experience. For computer display, follow these specifications:

Feature	Requirement
Screen Resolution	MAP Growth: 1024 x 768 for students; 1280 x 1024 for staff MAP Reading Fluency: 1280 x 720 for both students and staff
Scaling or Zoom	Set to 100%
Color Depth	32-bit recommended (minimum 16 bit)

Headphones for students

For tests designed for early learners, students can hear questions read aloud through audio playback. For the best experience, use headphones.

In addition, there are specific headphone recommendations for testing with MAP Reading Fluency:

- Over the ear, not buds
- Noise cancellation
- Boom microphone on the end of a stiff arm that extends in front of the child's mouth, rather than attached to the headphone cord
- USB connection for better sound quality

Network Bandwidth

The following bandwidth recommendations are based on best-estimate calculations. Test sites that do not meet these recommendations will be able to deliver assessments, but they may experience delays.

- Grades 3+ testing—**2 Mbps** for every 30 computers concurrently testing.
- Grades K–2 testing—**3 Mbps** for every 30 computers concurrently testing. More bandwidth is required because of audio and interactive features.
- Look for limitation points in your internal network (such as school-to-district connections when the district has the main internet connection).
- You may need to calculate the bandwidth requirements separately for each term, depending on the number of tests planned. The requirements increase when you test more students, more subjects, or more schools.

Note: Additional bandwidth is needed at the beginning of each MAP Growth assessment. The initial load is approximately 2.2 MB, and the load time varies based on available bandwidth.

Wireless Recommendations

Here are general guidelines for Wireless Access Points (WAPs), based on 802.11 g, n, or ac:

Number of Devices per WAP	Performance
25 devices	Acceptable
25–50	Check the performance
50 or more devices	Try to decrease the number of devices

WAP should be in the same room as the testing devices.

In the WAP configuration, strive to limit connections to just testing devices. Also, limit devices to connect only with the closest WAP (for example, avoid overlapping channels and disable promiscuous mode on devices). During testing, monitor for interference from rogue WAPs, non-testing devices, and non-testing activities, like iOS updates. If errors occur, try disabling automatic load balancing.

Firewall Allowlist and Email Configuration

For the following URLs, you should: add to your allowlists, exclude from caching, and prioritize the traffic. Update both hardware (such as firewall, content filter, and proxy server/cache) and software (such as antivirus and anti-malware). Allow the changes to propagate before testing.

Sites for test and administration:

- **For all MAP Suite products:**

- *.mapnwea.org
 - fonts.googleapis.com
 - gstatic.com
 - https://sso.mapnwea.org
 - https://teach.mapnwea.org
 - newrelic.com

- **For MAP Growth:**

- https://cdn.mapnwea.org/
 - https://cdn.jsdelivr.net
 - https://item-presenter-lib.mapnwea.org
 - https://test.mapnwea.org
 - https://test.mapnwea.org/#/nopopup
 - https://practice.nwea.org
 - https://studentresources.nwea.org

- **For Text-to-Speech accommodation tools in MAP Growth:**

- https://*.speechstream.net
 - https://speechstreamtoolbar-webservices.texthelp.com

- **For MAP Reading Fluency:**

<https://readingfluency.mapnwea.org>
<https://readingfluency-cdn.mapnwea.org>
<https://student.mapnwea.org>
<https://lmapl.mapnwea.org>

- **Sites for training, documentation, and analytics:**

<https://nwea.force.com/nweaconnection/>
<https://dpdol.nwea.org>
<https://legal.nwea.org>
<https://prolearning.nwea.org>
<https://prolearningonline.nwea.org>
<https://start.nwea.org>
<https://www.surveygizmo.com>

- **Allow in email spam filter (both server and clients):**

*@nwea.org

For example, MAP-AutoResponder@nwea.org is used to send login credentials to staff. Also, check whether your filters will block bulk emails from arriving in a short period of time. Either temporarily disable that filter or add an exception for *@nwea.org.

Staff Browser and Other Settings

You can either push the following configurations to staff devices or instruct staff to make changes themselves (if they have permission).

Browser settings:

- **Enable JavaScript.**
- **Enable cookies.** This setting can be applied globally or directly to the staff site teach.mapnwea.org.
- **Allow pop-ups.** Add the site teach.mapnwea.org to the list of allowed sites in the pop-up blocker settings, including pop-up blocker add-ons. If pop-ups remain blocked, then PDF reports will not display automatically and you must use an additional link to open them.
For staff completing NWEA training, also allow the above list of training sites.
- **Disable saved password.** Recommended for security purposes.
- **See also:** [Proctor, Teacher, and Staff Requirements](#) on page 3.

Other settings:

- **Set screen resolution.** Optimal screen resolution is 1280 x 1024.
- **Adjust clock if incorrect.** The device clock must be within 5 minutes of the official standard time in your area. If the time does not match, then access to reports and other parts of the site might fail.
- **Allow NWEA email.** If the device has a spam filter, ensure it allows email from *@nwea.org to receive the automated email with login credentials. Also, check whether your filters will block bulk emails from arriving in a short period of time. Either temporarily disable that filter or add an exception for *@nwea.org.