



PLATO Learning Environment[®] System and Configuration Requirements

For Workstations

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About This Document

Disclaimer: The system requirements provided by PLATO Learning are intended to be a guideline based on current hardware and software technologies. Actual performance may vary due to specific site hardware and software configuration parameters as well as other applications running on the computers at the same time. Due to advances and changes in these technologies, system requirements are subject to change without notice.

This document provides guidance to PLATO Learning customers about the environmental specifications for accessing the PLATO Learning Environment™ (PLE™).

In general, most users experience the Internet via standard HTML web pages, which use simple text and graphics that do not consume much bandwidth. PLATO Learning has gone beyond HTML to provide much higher production value. Therefore, the system requirements for PLATO Learning courseware are higher than simple web browsing on HTML pages.

In addition, many other factors can affect the PLATO Learning Environment performance, including the following:

- Proxy servers and web caching
- Firewalls
- Switches
- Available bandwidth of the local network
- Quality of the bandwidth provided by an Internet Service Provider

All of these factors interact with each other. Any combination of these variables **may** affect the overall performance of PLE.

If you are reading a printed copy of this document, please understand that this document is updated frequently. The most updated version of this document is located on the PLATO Learning Support Services website, or click on the following link for more information:

<http://support.plato.com/requirements.asp>

Additional Available Services

Additional assistance is available to ensure the overall system is ready to run the PLATO Learning Environment. PLATO Learning offers onsite, fee-based consulting services to assist with most situations. When using PLATO Learning's consulting services, the trained technical staff will work with the technical department to troubleshoot and remedy problems if encountered after the initial installation.

To find out more about PLATO Learning's fee-based consulting services, call 1-800-44-PLATO or e-mail info@plato.com.

Document Change Log

The following table lists the most recent changes to PLATO Learning Environment™ System and Configuration requirements:

Date	Updates
12/13/2010	<ul style="list-style-type: none"> • Removed “K-12” on the cover page • Updated “content” to “Courseware” where appropriate • Mac OS 10.6 Updates (Mac 10.6 is supported for Flash and Shockwave courseware as of 12/13/2010) <ul style="list-style-type: none"> ○ Updated to include support for Mac 10.6 for Shockwave based courseware ○ Deleted separate sections for Platform and Courseware
11/22/2010	<ul style="list-style-type: none"> • Updated MAC OS support statement on pages 5, 6, and 7.
10/18/2010	<ul style="list-style-type: none"> • Updated to include support for Mac OS 10.6 for the Platform and Flash based Courseware • Created separate sections for Platform, Flash-based courseware, and non-Flash based courseware • Formatting updates • Updated cover page to remove OS listing • Added Java under the plugin section
5/17/10	<ul style="list-style-type: none"> • Fixed formatting • Edited Text
4/16/10	<ul style="list-style-type: none"> • Added references to Windows 7 • Removed 2 GB RAM requirement for Windows Vista and Windows 7 • Fixed formatting
12/11/09	<ul style="list-style-type: none"> • Added 2.0 to cover page • Updated memory requirements for Windows® Vista SP2 (512 MB – 1 GB) to (1 GB – 2 GB) • Removed support for Windows® 2000 Professional with SP4 • Removed support for Internet® Explorer 6.0 with Service Pack 1. from Windows® XP Home or Professional with SP3
12/01/09	<ul style="list-style-type: none"> • Initial Draft

System & Configuration Requirements

Workstation System Requirements

The following information is the hardware and software requirements for workstations in order to access the **PLATO Learning Environment platform and courseware**. Systems should function without error at an acceptable performance level when requirements are met.

Windows

Windows® Vista Home Basic/Home Premium/Business/Ultimate
Windows® 7 Home Premium/Business/Ultimate
Windows® XP Home or Professional (SP3)

Processor Speed / Memory	• 1 GHz processor or faster with 1GB RAM
Internet Connection	• (See Internet Connection Speed - page 7)
Web Browser	• Internet® Explorer 7.0 • Internet® Explorer 8.0

Apple Macintosh¹

Macintosh® OS 10.4.X
Macintosh® OS 10.5.X
Macintosh® OS 10.6.X

Processor Speed / Memory	• PowerPC or Intel* with 1GB RAM
Internet Connection	• (See Internet Connection Speed on pages 7)
Web Browser	• OS 10.4.X <ul style="list-style-type: none">○ Safari 3.2.X○ Safari 4.X • OS 10.5.X <ul style="list-style-type: none">○ Safari 3.2.X○ Safari 4.X • OS 10.6.X <ul style="list-style-type: none">○ Safari 5.X

***On OS 10.4.11 the Intel processor is only supported while running Safari with Rosetta enabled. See <http://support.plato.com/kb/SupportArticles/11845.asp>**

All workstations also require the following:

- Hard disk space sufficient to run the workstation's operating system and web browser properly.
- Mouse
- Keyboard
- Monitor
- Sound card and speakers/headphones for audio enabled courseware

¹ Courseware based on the Authorware Player plug-in is not supported for Safari versions 4.x or 5.x. Flash-based replacements are available in PLE. Note also that PLATO Test Packs with Prescriptions and PLATO Exam Interventions currently leverage Authorware courseware. For a detailed list of affected courseware, please see Appendix A.

Workstation Configuration

Browser Cache Size

The default cache size of the web browsers on the workstations may be adequate. However, modifying the cache size setting *may* make a difference in the performance of the system. In general, increasing the cache size setting on the browsers typically improves system performance.

Enable JavaScript and ActiveX Controls

Internet Explorer® web browsers must have ActiveX® controls and JavaScript™ enabled to run the PLATO Learning Environment™.

Most browsers have these features enabled by default. However, they may be disabled if the default settings in the web browser have been changed.

For **Macintosh**® operating system-based machines check the web browser's Help file for instructions on how to enable plug-ins, enable scripting, or control access of Java Scripts.

Popup Blockers

If the workstation is running a **Windows**® operating system, the following instructions are based on the web browser version:

Internet Explorer® Version 7.0 and higher

1. Start Internet Explorer
2. Click Tools > Internet Options
3. Click the Security tab
4. Click the "Default Level" button, and then click **OK**

For more details, go to <http://support.plato.com/6398>

Note: If the "Default Level" button is not active, the browser already has the correct settings. No further changes are necessary.

Popup blockers must be disabled or configured properly in order to run PLATO courseware successfully.

Pop-up blockers or stoppers are used to prevent additional windows, typically advertisements, from opening within the web browser.

Workstation Configuration (continued)

Popup Blockers (continued)

Popup blocking software disables JavaScript™ popup ads, but it also disables legitimate web site functionality using JavaScript™. PLATO web-based courseware depends on JavaScript™ in order to run correctly.

The procedures to disable or configure popup blockers vary, depending on the software used. Assistance with configuring the settings should be available within the popup blocker application. Several widely available popup blockers, such as Yahoo!® or Google®, contain menus or buttons on the toolbar which allow users to uninstall or disable the blocker.

Enable Cookies

Cookies are required to be enabled on all workstations running the PLATO Learning Environment™.

Web browsers have cookies **enabled** by default. If cookies are not enabled for the browser on workstation, instructions can be found in the web browser's Help file. Simply start the web browser and then click "Help" on the menu bar at the top of the screen or from the menu bar.

Download & Install Plug-ins

PLATO® Learning Environment requires the use of plug-ins on workstations. The required plug-ins can be downloaded either from the login window of PLE or directly from vendor web sites.

For more details, go to <http://support.plato.com/pc>.

Downloading and installing the plug-ins may take a fair amount of time. Connection speed to the Internet, network traffic, and the number of workstations requiring the plug-ins are major factors in the installation time. It is recommended that plug-ins are downloaded and installed prior to students running PLATO Learning courseware for the first time. Users must have administrative privileges to the workstation in order to install the plug-ins. In addition, all programs must be closed at the point of installation.

If users encounter difficulty downloading or installing plug-ins, try the following:

- Check the rights on Windows® workstations. Windows® users must have administrative privileges to the local workstation or be set up as power users in order to install plug-ins. Check with the local network administrator for further assistance.

Workstation Configuration (continued)

Download & Install Plug-ins (continued)

- If a proxy server is present on the network, check setting that may require anonymous authentication to allow plug-ins to be installed. Once the plug-ins are downloaded, anonymous authentication can be disabled. Check with the local network administrator for further assistance.
- Check desktop security programs or forced Group Policies that may be limiting access to the workstation operating systems. Check with the local network administrator for further assistance.

Plug-ins for Windows users

The following plug-ins are required to run PLATO Learning courseware. To download and install plug-ins on workstations with Windows operating systems, click on the links below.

[Flash Player](#)
[Shockwave® Player \(Full Install\)](#)
[Authorware® \(Full Install\)](#)
[PLATO Xtras](#)
[Java](#)

Plug-ins for Mac® OS X users

The following plug-ins are required to run PLATO Learning courseware. To download and install plug-ins on workstations with Mac OS X operating systems, click on the links below.

[Flash Player](#)
[Shockwave® Player \(Full Install\)](#)
[Authorware® \(Full Install\)](#)
[PLATO Xtras](#)
[Java](#)

Adobe® Reader® (for Windows® and Mac)

Online documentation for PLATO products requires Adobe® Reader® 7.0 or higher. The latest version of Adobe® Reader® can be downloaded directly from <http://www.adobe.com/support/downloads/>

Additional Software

Additional software is required to access the most recent PLATO Courses.

Workstation Configuration (continued)

Additional Software (continued)

Sun Java

New and updated PLATO Courses contain Java simulations to enrich the user's experience. In order to utilize the new courses, the Java plug-in must be installed.

Compatible Software

In addition to new courses, new offline lessons will utilize the following files types: **.doc**, **.xls**, and **.ppt**.

Several software suites available in Windows and Macintosh OS versions support these files types, including:

- iWork (Macintosh)
- MS Office (Windows or Macintosh)
- Open Office (Windows or Macintosh)

Lastly, video is utilized in several courses. Video files will be available in the following formats: **.mov** and **.mpg / .mpeg**. Video Players capable of playing the following file types:

- QuickTime (.mov)
- MPEG (.mpg, .mpeg)

Network Requirements & Configuration

Before PLATO® courseware can be accessed through the network, the following configuration settings must be made to the local network.

Open Ports

If PLE is to be accessed from behind a firewall or other network security device that limits access to the Internet, the following ports must be opened for network data traffic. PLE cannot be accessed unless the ports are opened for bidirectional traffic.

In addition, security devices are frequently set to automatically disconnect a user session after a period of inactivity. PLATO Learning suggests timeout periods should be set to disconnect sessions after no less than 30 minutes.

Port 80	Standard HTTP port for web page access
Port 443	Must be open for HTTPS for an SSL connection (Secure Sockets Layer)

Internet Connection Speed

PLATO Learning requires a connection to the Internet. Performance of PLATO products on this connection is dependent on:

- the courseware being used
- the number of computers *simultaneously* accessing the courseware (this is not the same as the total number of workstations)
- the available unused bandwidth of the connection

In general, PLATO recommends the following bandwidth:

- PLATO® Straight Curve® Courseware – 128Kbps per *simultaneous* workstation
- PLATO® Life Science, Physical Science, and Earth and Space Science Courseware – 128Kbps per *simultaneous* workstation
- All other PLATO® Courseware requires 40Kbps per *simultaneous* workstation

Network Configuration & Requirements (continued)

Content Cache Server

Actual system performance may vary due to specific site software configuration parameters and other software applications that may be running.

To optimize the internet connection, PLATO Learning highly recommends the use of a Content Cache Server. A Content Cache will reduce the amount of bandwidth required and will improve the performance of the PLATO products.

The PLATO Content Cache Server represents the latest generation of caching, content acceleration designed especially for schools. The PLATO Content Cache Server is the ideal choice for networks with dedicated Internet or WAN uplinks as low as 10 Mb/s with moderate Internet, Intranet and web application use.

The PLATO Content Cache Server:

- Maximizes delivery speed of PLATO Learning content to learners while reducing 65-80% of bandwidth consumption
- Supports more PLATO Learning users without adding bandwidth
- Minimize ongoing infrastructure and bandwidth costs

A member of the PLATO Learning Engineering staff will work with the technical team to identify the appropriate deployment option and configure the server(s) to integrate with the existing network configuration in order to maximize content delivery speed to the learners' desktop. Ongoing appliance monitoring and management is easily accomplished via the web browser administrator GUI or an SSH client.

Filtering Software

It is recommended that web filters are not used to scan the content of PLATO Learning courseware. Filtering PLATO Learning content may dramatically reduce performance. If a content filter is present on the network, it is recommended that it is configured to trust all content from the PLATO Learning domain.

Great precautions are taken to ensure all content delivered free from viruses and inappropriate material. Filtering within the local network is redundant and will significantly reduce the overall performance of PLATO Learning courseware.

Additional Information

Additional information on firewall and content filtering configurations can be found on the PLATO Learning Support Services website, or by clicking on the following link: <http://support.plato.com/11927>.

Appendix A: Authorware based Courseware

Subject	Courseware	Type	Grade Level
Science	Biology Series	Title	Secondary
Science	Chemistry Series	Title	Secondary
Science	PLATO Course Biology v2.0	Course	Secondary
Science	PLATO Course Chemistry v2.0	Course	Secondary