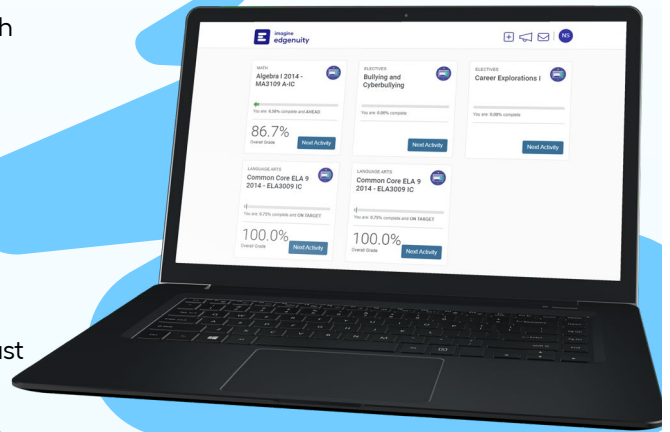


Imagine Edgenuity® Tech System Overview

Welcome to Imagine Edgenuity

Imagine Learning's solutions are designed for ease of use with deployment, maintenance, and functionality in a typical educational technology environment. The system predominantly runs on a hosted platform housed within secured data centers. Our customers can feel assured student data is safe and secure with absolutely no work required by school district personnel.

We have taken great care in engineering and designing a robust system with redundancy built in at every level. Multiple levels of backup are incorporated into the onsite and offsite real-time systems. As students and teachers log in to our program, they access servers located within the secured data centers. Student computers will access the Student Portal via the internet with information transfer requirements equivalent to standard website interactions. School lab environments will require little internet bandwidth to function.



Minimum System Requirements

Supported Operating Systems¹

- Android™ 5.0+
- Apple iOS 10.3+
- Mac® OS X® 10.9+
- Chrome™ OS™ 57+
- Windows® 7, 8, 10

Browsers²

- Chrome
- Firefox®
- Safari®
- Microsoft® Edge

Minimum Bandwidth

Mobile data usage will average **110 MB** per lesson. Semester courses consist of approximately 40-50 lessons.

| Activity Type | Average Download per Activity |
|----------------|-------------------------------|
| Vocabulary | 2.1 MB |
| Warm-up | 11 MB |
| Instruction | 73 MB |
| Online Content | 10 MB |
| Assignment | 8 MB |
| Assessment | 5 MB |



System Requirements

NETWORK/SPEED CONNECTION³

- LAN 100/1000 switched to desktop
- Imagine Edgenuity runs on a web-based platform, so use of school Wi-Fi is recommended
- Internet access of 384 kbps per concurrent user
 - 2 mbps per concurrent user is recommended when using mobile devices
- Wi-Fi with 54 mbps access points or better

MEMORY

- 1+ GB RAM

PROCESSOR

- 2.33 GHz AMD® or Intel® 1.33 GHz

SOUND⁴

- OS-supported sound card
- Microphone, speakers, or headset

Network Requirements & Allowed URLs

An internal proxy system ensures students are on-task and remain safe when using outside content contained within course activities. This also allows for a smaller, more static allowed URL List.

To support the close and active reading of text for students at all reading levels, Imagine Edgenuity provides a CloseReader™ toolset for students. The toolset includes word look-up, text highlighters, annotation tools, read-aloud, and translation. Students can use these features on any HTML text within the system, including text within a third-party website accessed from the Student Portal.

The CloseReader and internal proxy system both rely upon the required ports and allowed URL List provided below. Allowing Google sites listed within the allowed URL List through a content filter will not open all Google content, as it is referencing specific directories needed for the CloseReader.

The allowed URL List for eDynamic Learning courses can be found at edgenuity.com/support/technical-requirements/.

Required Ports⁵

The following outgoing communication ports for required IP ranges must be applied within the network when using Imagine Edgenuity.

Port 80

Port 443

Additional World Language Protocols

The following protocols are required when using courses containing world language courses.

*.powerspeak.edgenuity.com
RTMP/E Port 1935/TCP

*.powerspeak.edgenuity.com
RTMFP Port 1935/UDP

*.powerspeak.edgenuity.com
RTMP, RTMPT.HTTP Port 80/TCP



Required Allowed URL List⁶

| | | |
|----------------------------------|--------------------|------------------------------------|
| *.akamaihd.net | *.jsdelivr.net | bam.nr-data.net |
| *.bam.nr-data.net | *.k12hsn.org | desmos.com/calculator |
| *.boltDNS.net | *.learnosity.com | education2020.us |
| *.brightcove.com | *.middil.com | el-gizmos.s3.amazonaws.com |
| *.brightcove.net | *.onetonline.org | emissary.edgenuity.com |
| *.edgenuity.com ¹ | *.pendo.io | google.com/ jsapi |
| *.edgenuity.us | *.pplms.com | google.com/uds |
| *.edgenuityapp.com | *.sophia.org | help.imagineedgenuity.com/hc/en-us |
| *.education2020.com ¹ | *.speechstream.net | labs.edynamiclearning.com |
| *.explorellearning.com | *.ucopenaccess.org | newrelic.com |
| *.fueleducation.com | *.wna.cloud | office.microsoft.com |
| *.googleapis.com | *.wne-cdn.com | static.ada.support |
| *.gstatic.com | *.zdassets.com | unpkg.com |
| *.imagineedgenuity.com | *.zendcdn.net | |
| *.imaginelearning.com | *.zendesk.com | |

Teacher-Specific Required Allowed URL List

| | | |
|----------------|-------------------|--------------------------------|
| *.box.com | *.pusher.com | *.zopim.io |
| *.box.net | *.smartsheets.com | d2qhvajt3imc89.cloudfront.net |
| *.boxcdn.net | *.walkme.com | d3sbxpiag177w8.cloudfront.netS |
| *.boxcloud.com | *.zdassets.com | sisense.edgenuity.io |
| *.boxrelay.com | *.zoom.us | |
| *.il-apps.com | *.zopim.com | |

Instructional Services

The additional sites below are required when using Instructional Services for tutoring chat purposes.

| | | |
|-------------------|---------------------------------------------------------|-------------------------------|
| *.agilixbuzz.com | *.owschools.net | pbskids.org |
| *.glynlyon.com | *speechstream.net | sas.illuminate.com |
| *.odysseyware.com | e2020.geniussis.com | User Agent: smtp.sendgrid.com |
| *.owschools.com | Genius dedicated sending IP (static): 149.72.150.166 | User Agent: smtp.sendgrid.net |

Allowed Email Server

| | | |
|-----------------------|-----------------------------|--|
| Domain: edgenuity.com | Domain: imaginelearning.com | |
|-----------------------|-----------------------------|--|

Course-Specific Allowed URL List

For course-specific allowed URLs, please visit edgenuity.com/techsupportdocs/Courseware_Course_Specific_Allowed_URL_List.xlsx

¹ The Android operating system is supported by Imagine Edgenuity, but the Android browser is not. Android users should download and only use the Chrome browser to access Imagine Edgenuity.

² Imagine Edgenuity products are tested on the latest supported browser versions. Internet Explorer is not supported for Middlebury PowerSpeak World Languages.

³ Students will need access to audio capabilities including speakers and/or headsets.

⁴ Slow internet connections will affect the performance of multimedia elements found in Imagine Edgenuity courses.

⁵ Ports 80 and 443 must be opened for sites and Present Outbound Internet Addresses noted above. Port 1935 must be opened for sites utilizing Instructional Services. Proxy and content filters may disrupt communication on all ports. Ports 80 and 443 must be open for sites noted.

⁶ Allowed URL items must be applied within your network for optimal use. Some items will pertain to general use, such as Imagine Edgenuity website wildcards. Other allowed URL items such as LivePerson and Zendesk® may be used in conjunction with tools utilized for support needs of students and educators.

Imagine Edgenuity utilizes mp4 video formatting for course content videos. You will need to ensure mp4s are included for allowed URL sites within the network.



System Login and Security: Enhanced Passwords

Imagine Edgenuity provides several security features including enhanced password security for secure student access.

Imagine Learning has signed the Student Privacy Pledge developed by the Future of Privacy Forum (FPF) and the Software & Information Industry Association (SIIA). The provisions require additional security to protect student data against unauthorized third-party access.

All passwords are encrypted within Imagine Edgenuity, preventing the information from being visible within the student and educator profile screens. Storing and transmitting encrypted passwords prevents anyone from acquiring passwords and sensitive student data.

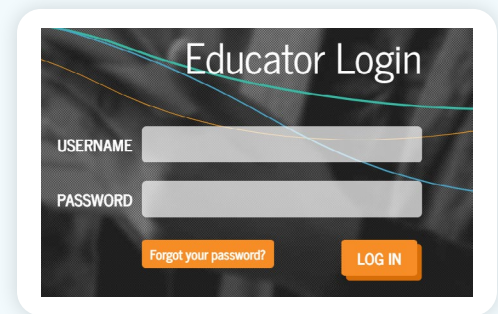
Student and educator passwords can be in any format you wish and are case sensitive. For security reasons, we recommend against creating passwords with predictable patterns such as student ID numbers. Reset features are incorporated into Imagine Edgenuity for Educators to assist users in password retrieval.

Forgot Your Password

Forgot your password is a self-service feature that can be selected within the Imagine Edgenuity login screen should a user be unable to log into their account. Users receive a password reset email to the address on file to regain access.

Password reset emails will come from '*noreply@edgenuity.com*.' It is recommended to check junk or spam folders within the supplied email account if an email is not received shortly.

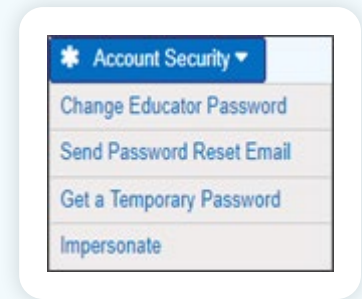
Please note: Imagine Edgenuity does not require a user email address; it is recommended all educators update their account to include a current email address for the password retrieval feature. Alternative options are available should students not have an email address associated with their account.



Password Reset Features

Educators with the associated security permissions can assist student and fellow educator users in regaining access to their Imagine Edgenuity account with *Change Educator (or Student) Password*, *Send Password Reset Email*, and *Get Temporary Password* features.

Please note: When using Get Temporary Password, the user's original password is removed from the account and will no longer work.



CHANGE EDUCATOR (OR STUDENT) PASSWORD

Allows an educator to enter a new student or educator user password

SEND PASSWORD RESET EMAIL

A password reset email can be sent if the user account has an associated email address.

GET TEMPORARY PASSWORD

Educators can establish a temporary password for users to log in.

The user must establish a new password after log in. This feature can be used if you don't want the person changing the password to know the final password.

IMPERSONATE

Educators can assist students by logging into the Imagine Edgenuity account as the user. Once the account is accessed, the educator can view and interact within the system as the user. Impersonation sessions are recorded and logged within 'Recent Actions' similar to other actions that occur within the system.

Please note: When using the Impersonate feature, please be aware of the following:

- A warning will display for an active session if the student is currently logged into their account. Continuing with Impersonate will log the student off their active session.
- Any actions taken during an impersonation session will be logged as though the student completed them.

Password encryption does not affect login credentials managed via API, LTI, LDAP, or SAML integration. Users sign in with credentials managed by a school and are not maintained by Imagine Edgenuity. Passwords will not be overwritten for users with nightly imports where manual password changes may occur.



System Login and Security: IP Registry

For secure student access, the IP Registry feature allows schools to prevent students from logging into Imagine Edgenuity from outside the school's network.

IP Registry can also be configured to allow student access to Imagine Edgenuity from home to complete instructional activities but require all assessments be completed at school once students are back on the school's network.

How Do I Prepare?

Once you've made the following decisions, you are prepared to enable IP Address Registry.

- For each school, decide which educator account holders will be given the user permissions to create and administer IP Address Registry and individual student bypasses.
- For each school, determine the IP addresses (or ranges) of the firewall or edge router that represents the 'gateway' to the internet. You will enter this IP address or range in the Imagine Edgenuity configuration page.
- Decide whether you want students on non-approved IP addresses to be completely blocked from accessing Imagine Edgenuity or to be allowed access to coursework but not assessments.
- If you have individual students with permission to do coursework and assessments from home, prepare a list of those students. You will be able to put those student accounts on a bypass list that lets them access Imagine Edgenuity from outside the block of registered IP addresses.

Additional information regarding IP Address Registry is available within the Imagine Educator portal. Please contact Customer Support for more information on this feature.

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Chromebook™ Device Usage

Imagine Edgenuity can be accessed and completed on Chromebooks. Schools and districts utilizing the Imagine Edgenuity system on mobile devices will need to ensure devices meet the minimum systems requirements below.

Incompatible Courses for Chromebooks

Imagine Edgenuity is fully compatible with Chromebooks with a small number of exceptions.

1. Some IT/programming courses require the use of Python. Students working on Chromebooks can access Python via the web-based PythonAnywhere app, which includes support for both students and teachers. This applies to the following national course titles, as well as any state-specific versions that include coding:
 - **Introduction to Computer Science**
 - **Fundamentals of Programming and Software Development**
 - **Introduction to Coding**
 - **Introduction to IT**
2. In addition, the following course requires Java. The installation of the Java application on Chromebooks requires advanced IT support:
 - **Fundamentals of Programming and Software Development**
3. Some eDynamic Learning courses require installation of the multimedia software Blender and Unity. The installation of these software applications on Chromebooks also requires advanced IT support. This includes the following national course titles:
 - **Animation**
 - **Game Design**
4. Some courses require the use of MS Office applications. Students working on Chromebooks will need access to MS Office 365 to complete these courses:
 - **Microsoft Office® Specialist**
 - **Computer Applications: MS Office 2019**
5. The following course is compatible on Chromebooks only with a strong IT department, as it requires both Scratch and Python. These programming languages can run on a Chromebook with good IT support:
 - **Middle School Computer Science**

Operating System

Chrome™ OS 57+

Browser

Google™ Chrome™

Example Devices

Chromebook Pixel, Dell™ Chromebook 11, Acer Chromebook 15 C910



Apple® iPad® Usage Overview

Imagine Edgenuity can be accessed and completed on Apple iPad devices. Schools and districts utilizing the Imagine Edgenuity system on mobile devices will need to ensure devices meet the minimum systems requirements below. Third-party software installation is not supported on iOS devices.

Incompatible Courses for Apple iPads

Imagine Edgenuity is fully compatible with iPad devices with a small number of exceptions.

1. Some IT/programming courses require the use of Python. Students working on Apple iPads can access the web-based Pythonista app to use Python. This applies to the following national course titles, as well as any state-specific versions that include coding:
 - **Introduction to Computer Science**
 - **Fundamentals of Programming and Software Development**
 - **Introduction to Coding**
 - **Introduction to IT**
2. The following course requires Java, which is not compatible with Apple iPads:
 - **Fundamentals of Programming and Software Development**
3. Some eDynamic Learning courses require installation of the multimedia software Blender and Unity which are not compatible with iPads. There are alternatives to these apps available for iPad that can be used with the teacher's direction to identify and substitute a preferred alternative application for Blender and Unity when these apps are referenced in the course. The following courses reference the Blender and Unity apps specifically:
 - **Animation**
 - **MS Game Design**
 - **Game Design**
4. Some courses require the use of MS Office applications. Students working on Apple iPads will need access to MS Office 365 applications for iPad for the following courses:
 - **Microsoft Office® Specialist**
 - **Computer Applications: MS Office 2019**
5. **Middle School Computer Science** is not compatible with iPads

Operating System

Apple iOS 10.3+

Browser

Safari®

Example Devices

iPad (4th generation+), iPad Pro,
iPad mini 2™



Android™ Usage Overview

COMPATIBILITY

- Smart phones and smart watch devices are not supported
- The Android operating system is supported, but the Android browser is not. Android users should download and use the Chrome browser to access Imagine Edgenuity
- Districts can use the IP Registry feature to regulate which IP addresses are pre-approved to take assessments

Operating System

Android: 5.0+ (Lollipop or higher)

Browser

Google™ Chrome™

Example Devices

Google Pixel C, Dell Venue 10 7000,
Samsung™ Galaxy Tab® 3

