Getting Your Computers Ready for FUSE: The I.T. Guide

Updated May 2026 for 2026-2027 School Year

Contact **help@fusestudio.net** with any questions.

Required Action Items for Student Devices

- ❑ Whitelist online resources
- ❑ Install software on full computers for student access (minimum 2 per FUSE classroom)
- ❑ Prepare Chromebooks, if used
- ❑ Look for annual updates for whitelisting and software every May

Recommended:

- ❑ Install software on teacher devices
- ❑ Having a few computer mice available is a benefit to students
- ❑ Ensure your staff know how to receive local IT support if needed (i.e. ticketing system/help desk)

About FUSE

FUSE is a STEAM education research project housed in Northwestern University's School of Education and Social Policy. FUSE is used in about 200 schools across 18 states each year. FUSE takes a choice-based, interest-driven approach toward STEAM; in FUSE, students try different STEAM Challenges that become progressively more complex. Research shows that FUSE students develop new STEAM interests and deepen their 21st century skills like problem-solving, collaboration, and persistence.

FUSE, online resources, and Google SSO

To create onramps to deeper STEAM engagement, FUSE uses real-world, state-of-the-art design and technology tools. FUSE identifies these tools through rigorous testing. The online resources we recommend are education platforms, designed to expose young designers to the possibilities of digital content design and creation in a safe and age-appropriate interface.

While FUSE hosts software within our platform whenever possible, we do use some external third party resources. Each of these resources provides the option for students to sign in via Google Single Sign on (SSO), offering an additional layer of account and data security. Google SSO saves students and instructors instructional time by reducing the burden of remembering different passwords and login protocols for different websites.

In 2023 Google began requiring districts to approve which specific websites permit signing in via SSO. **Our recommendation is to permit the use of SSO for the external sites used in FUSE** (Tinkercad, Bandlab for Education, and Sketchup).

If a district does not permit access to Google SSO, we recommend that teachers create **shared generic accounts** to allow continued student access to our full suite of FUSE Challenges. Since our inception, FUSE has always recommended this option for families or districts with data privacy concerns. Creating and managing these accounts adds to the burden of the FUSE Facilitator, but is always an option with any digital platform we recommend.

Whitelisting & Content Monitoring

The full list of websites and software that a student will encounter in FUSE is listed below. Please whitelist these sites for all student devices. FUSE utilizes instructional videos produced by humans (we do not use generative AI). Videos are hosted on our private domain and only accessible via our encrypted website. Since FUSE is approved in your school/district, please ensure that all whitelisting extends to image/video permissions for all FUSE media, and extends to any ongoing content monitoring platforms. If your district switches providers for whitelisting/monitoring, please be sure to re-whitelist FUSE content!

FUSE sends updated whitelisting info each May, ahead of the following school year.

Software Installation Packages

Here is the link for our software installation packages, available for both Mac or PC.

While most FUSE Challenges are Chromebook compatible, to get the fullest FUSE experience we ask Innovate partners to locate at least two full computers in their FUSE lab. The software installation package includes 4 pieces of software**: Blender, Prusa Slicer, Arduino IDE, and Silhouette Studio**. Versions for both Macs and PCs are included. Each piece of downloaded software will need to be installed individually, though some schools choose to install all software on one computer and then clone that computer onto other machines used in FUSE.

Note: we intentionally use some older versions of software for various reasons (i.e. to keep the required hardware specifications more accessible, to keep preferred features/layout, etc). If you install newer versions of the software, it may create problems for teachers and students as the interface may no longer match our instructional videos or it may run poorly on underpowered devices. Any software updates will be communicated in May, for the following school year.

Minimum Computer Specifications for Installed Software

- Operating System: PC (*Windows 8 and higher*) OR Mac (*OS X 10.10 and higher)*.
- Internet connection: 5mbps download/1mbps upload
- RAM: 4 GB of RAM
- Processor: 2 GHz (*or faster*) processor speed
- Memory: 2 GB hard disk space
- USB Port: USB 2.0 Port (*or higher*)
- Graphics Card: OpenGL 2 compatible graphics card

Chromebook Preparation

- **Minimum 4GB of RAM**
- Bluetooth should be enabled
- USB ports should be enabled to send and receive data

- WebGL should be enabled (Test WebGL on Chromebook)(How to enable WebGL)

Whitelisting

Below is the full list of websites requiring student access, listed in two formats. Updates will be released in May of each year, for the following academic year.

Whitelist by Challenge

Utilized By	Sites to Whitelist
FUSE Website Functionality and General Use Please note: Wistia and Filestack are essential utilities that allow the FUSE website to function properly. Although testing these subdomains may yield incomprehensible results, student access is essential to ensure students can properly engage in FUSE.	FUSE hosts a variety of software within various subdomains; we recommend whitelisting the wildcard domain to ensure access: ***.fusestudio.net** ***.wistia.com** ***.filestackapi.com** If the wildcard is unable to be whitelisted, the following subdomains should be whitelisted: Whether using the wildcard or subdomains the following sites also need to be whitelisted https://www.fusestudio.net https://my.fusestudio.net **my.fusestudio.net/blockly** **my.fusestudio.net/code-editor-projects** **my.fusestudio.net/draw** **my.fusestudio.net/gamedesign** **my.fusestudio.net/gitg/2drunner** **my.fusestudio.net/gitg/runner** **my.fusestudio.net/gitg/ddr** **my.fusestudio.net/gitg/drumroller** my.fusestudio.net/jumbotron my.fusestudio.net/microbit **my.fusestudio.net/pixelart** **my.fusestudio.net/sculpt** **my.fusestudio.net/sfx** my.fusestudio.net/video-editor challengesoftware.fusestudio.net cdn.fusestudio.net distillery.wistia.com embed-fastly.wistia.com embed-ssl.wistia.com wistia.com embed-fastly.wistia.com cloud.filestackapi.com

	Static.filestackapi.com upload.filestackapi.com upload-us-east-1.filestackapi.com https://wistia.com/ cdn.art.fusestudio.net Whether using the wildcard or subdomains, the following sites also need to be whitelisted: embedwistia-a.akamaihd.net fast.wistia.net fonts.gstatic.com fonts.googleapis.com distillery.wistia.com fuse-prod-artifacts.s3-us-east-2.amazonaws.com icons8.com
Card Crafter	https://www.silhouette-web.com/design
Balancing Act, Keychain Customizer, Cookie Customizer, Eye Candy, Jewelry Designer, Print My Ride	https://www.tinkercad.com/
Design to Fly	https://fuse.geo-fs.com/ (password = airfuse1) https://data.geo-fs.com https://cesium.com/platform/cesiumjs/
Dream Home, Dream Home 2	https://www.sketchup.com/
Game Designer	https://my.fusestudio.net/gamedesigner/
Party Lights, Mini Jumbotron, Smart Castle	https://create.arduino.cc/
Friend Finder	https://my.fusestudio.net/microbit
Beats Builder	https://edu.bandlab.com/mix-editor https://static.bandlab.com/ https://realtime.bandlab.com/ https://bandlabimages.azureedge.net/ https://api.layer.com/

	https://bandlab-prelude-prod-samples-original.s3-accelerate.amazonaws.com/
Get In the Game	https://my.fusestudio.net/gitg/runner https://my.fusestudio.net/gitg/2DRunner https://my.fusestudio.net/gitg/ddr https://my.fusestudio.net/gitg/drumroller https://scratch.mit.edu/projects/31651654
Robot Rodeo	https://code.makewonder.com/blocklypro/ https://code.makewonder.com/cue/#/ https://code.makewonder.com/blocklypro/#/?utm_source=fuse23
Sculpty Pet	https://my.fusestudio.net/sculpt
Print My Ride, Cookie Customizer	https://my.fusestudio.net/draw
Video Magic Tricks	https://my.fusestudio.net/video-editor/ api.rendleysdk.com cdn.rendleysdk.com

Single List of Sites to Whitelist

***.fusestudio.net**
***.wistia.com**
***.filestackapi.com**

https://www.fusestudio.net/
https://my.fusestudio.net/
https://my.fusestudio.net/blockly
https://my.fusestudio.net/code-editor-projects/
https://my.fusestudio.net/draw
https://my.fusestudio.net/gamedesign
https://my.fusestudio.net/gitg/2drunner
https://my.fusestudio.net/gitg/runner
https://my.fusestudio.net/gitg/ddr
https://my.fusestudio.net/gitg/drumroller
https://scratch.mit.edu/projects/31651654/
https://my.fusestudio.net/jumbotron
https://my.fusestudio.net/microbit
https://my.fusestudio.net/pixelart
https://my.fusestudio.net/sculpt
https://my.fusestudio.net/sfx
https://my.fusestudio.net/video-editor/
https://challengesoftware.fusestudio.net/
https://cdn.fusestudio.net
cloud.filestackapi.com
static.filestackapi.com
https://wistia.com/
fast.wistia.net
embed-fastly.wistia.com
embedwistia-a.akamaihd.net

distillery.wistia.com
embed-ssl.wistia.com
fonts.gstatic.com
upload.filestackapi.com
upload-us-east-1.filestackapi.com
fuse-prod-artifacts.s3-us-east-2.amazonaws.com
cdn.art.fusestudio.net
icons8.com
https://www.silhouette-web.com/design
https://www.tinkercad.com/
https://fuse.geo-fs.com/ (password = airfuse1)
https://data.geo-fs.com
https://cesium.com/platform/cesiumjs/
https://www.sketchup.com/
storage/googleapis.com
https://create.arduino.cc/
https://edu.bandlab.com/mix-editor
https://static.bandlab.com/
https://realtime.bandlab.com/
https://bandlabimages.azureedge.net/
https://api.layer.com/
https://bandlab-prelude-prod-samples-original.s3-accelerate.amazonaws.com/
https://code.makewonder.com/blocklypro/
https://code.makewonder.com/cue/#/
https://code.makewonder.com/blocklypro/#/?utm_source=fuse23