

APPENDIX C – COMPUTER SPECIFICATIONS

PLTW curricula utilize powerful, industry-based software. Ensure computer hardware meets or exceeds the specifications below. Please be sure to make this purchase in consultation with your IT department. Please note the following are not supported for use in PLTW coursework:

- Chromebooks
- Open Office
- Google Docs
- Windows 10

PLTW Engineering:

- **Each teacher must have a laptop (1:1 ratio)**
- **Each student must have a laptop or desktop computer (1:1 ratio)**

Specification	Minimum	Recommended
Processor	Intel® processor 2.0 Ghz or greater	Intel® Xeon® I5 or i7 processor 3.0 Ghz or greater
RAM	8 GB +	8 GB +
Hard Drive	500 GB +	1 TB +
Video Card	512 MB + dedicated RAM, Microsoft® Direct3D 10® capable graphics card or higher supporting 1280 x 1024 screen resolution*	1 GB + dedicated RAM, Microsoft® Direct3D 11® capable graphics card or higher supporting 1280 x 1024 screen resolution*
Optical Drive	Not required for PLTW Software	Not required for PLTW Software
Operating System	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.9 +. Bootcamp required with one of the above Windows operating systems.	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.11+. Bootcamp required with one of the above Windows operating systems.
Network	Must have network connectivity (wireless and/or wired)	Must have network connectivity (wireless and/or wired)
Other Basic Software (go here for a complete listing of all needed software).	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs

**IMPORTANT: Basic Intel graphic chipset or other chipsets with shared memory should not be used for video display. See the Autodesk certified graphics hardware page [here](#) as reference tool in selecting graphics hardware.*

PLTW Engineering - Printer Specifications:

Print speed: Up to 35 ppm
 Resolution: 600X600 dpi, color not required
 Memory: 128 MB min
 Paper size: Letter, legal, 11X17 (required)
 Network ready

PLTW Biomedical Science:

- **A laptop is recommended for each student and teacher for PLTW Biomedical Science courses (1:1 ratio)**

Specification	Minimum	Recommended
Processor	Intel® processor 2.0 Ghz +	Intel® processor 3.0 Ghz +
RAM	4 GB +	4 GB +
Hard Drive	250 GB +	250 GB +
Video	Graphics 128 MB +	Graphics 256 MB +
Operating System	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.7+	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.11+
Network	Must have wireless network connectivity	Must have wireless network connectivity
Other Basic Software (go here for a complete listing of all needed software).	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs

PLTW Biomedical Science Printer Specifications:

Print speed: Up to 35ppm
 Resolution: 600X600 dpi minimum, Color not required
 Memory: 128 MB min
 Paper size: Letter, Legal
 Network ready

PLTW Gateway (all units except Green Architecture):

- **A laptop or desktop is recommend for each student and teacher for PLTW Gateway courses (1:1 ratio)**
- **Green Architecture requires the use of Autodesk Revit software. Please refer to the PLTW Engineering computer specifications above.**

Specification	Minimum	Recommended
Processor	Intel® processor 2.0 Ghz +	Intel® processor 3.0 Ghz +
RAM	4 GB +	4 GB +
Hard Drive	128 GB +	256 GB +
Video	Graphics 128 MB +	Graphics 256 MB +
Operating System	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.7+	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.11+
Network	Must have network connectivity (wireless and/or wired)	Must have network connectivity (wireless and/or wired)
Other Basic Software (go here for a complete listing of all needed software).	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs

PLTW Gateway Printer Specifications:

Print speed: Up to 35ppm
 Resolution: 600X600 dpi minimum, Color not required
 Memory: 128 MB min
 Paper size: Letter, Legal
 Network ready

PLTW Computer Science:

- **Android tablets AND computers (laptop or desktop) are required.**
- **iPads are not supported for use in PLTW Computer Science coursework**
- **Android tablets are required for each teacher (1:1 ratio) and no more than a 2:1 ratio for students.**

Android Tablet Specifications	
Processor	1 Ghz +
RAM	1 GB +
On Board Storage	16 GB +
Screen Size	7 inches +
Operating System	Android v4.4.2 +
Network	WIFI enabled (no cellular required) ; Must have wireless network connectivity*
Other Required Embedded Hardware	Front or Rear facing camera (having both is recommended) Accelerometer Microphone Bluetooth® USB Drivers must be available for the device

A computer (laptop or desktop) is required for each teacher and each student (1:1 ratio)

Computer Specifications		
Specification	Minimum	Recommended
Processor	Intel® processor 2.0 Ghz +	Intel® processor 3.0 Ghz +
RAM	4 GB +	8 GB +
Hard Drive	250 GB +	250 GB +
Video	Graphics, 128 MB +	Graphics, 256 MB +
Operating System	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.6.	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.10.
Display	21" or greater external monitor per computer is required	21" or greater external monitor per computer is required
Network*	Must have wireless network connectivity*	Must have wireless network connectivity*
Other Basic Software (go here for a complete listing of all needed software).	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs

* Under many circumstances an 802.11 wireless router may be needed in the classroom in order to use MIT App Inventor with Android tablets and computers. Please test your unique classroom environment to ensure adequate wireless access is in place. If you do need to make a wireless router purchase, please verify the selected router will allow adequate simultaneous connections by contacting the manufacturer and discussing the number of devices that will be concurrently used.

2016-17 Purchasing Manual Instructions

PLTW Launch:

- **iPad or Android tablets are required for students at no more than a 4:1 student to tablet ratio**
- **Each teacher requires either a desktop or laptop computer **AND** a tablet**
- **Chromebooks and Windows tablets are **NOT** supported for use in PLTW Launch coursework**
- **See our required [App listing](#) for PLTW Launch**

iPad Specifications	
Supported Models	All models except first generation iPad
Screen Size	7.9 inch or 9.7 inch display
On Board Storage	16 GB +
Operating System	iOS 8 +
Network	WIFI enabled (cellular not required) ; Must have wireless network connectivity*

- Apple configurator is a common tool used to manage multiple iPads at the same time. Schools should consider using this tool in order to assist in iPad App management. NOTE: Apple Configurator software must be used on an OSX device. Please consult with your IT department on how your school currently manages (or plans manage) iPad App installations before making a laptop purchase.

Android Tablet Specifications	
Screen Size	7 inch +
On Board Storage	16 GB +
Operating System	Android v4.4.2 +
Network	WIFI enabled (cellular not required) ; Must have wireless network connectivity*

Teacher Laptop Specifications		
Specification	Minimum	Recommended
Processor	Intel® processor 2.0 Ghz +	Intel® processor 3.0 Ghz +
RAM	4 GB +	4 GB +
Hard Drive	250 GB +	250 GB +
Video	Graphics 128 MB +	Graphics 256 MB +
Operating System	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.6+	Windows 7 or Windows 8.1, 64 bit operating system or Apple device with OSX 10.11+
Network	Must have wireless network connectivity*	Must have wireless network connectivity*
Other Basic Software (go here for a complete listing of all needed software).	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs	Internet Explorer 9 or later Current version of Firefox or Chrome is recommended for optimal utilization of the PLTW Learning Management System (LMS) Adobe Flash Player 15 or later Microsoft Office, v. 2007 through 2013 or Office 365 E3 version only, for iComponents, thread customization, and spreadsheet-driven designs

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