

2020-21 STEM School Highlands Ranch

Laptop Recommendations

The following provides recommended specifications and information for purchasing a laptop for your student at the STEM School Highlands Ranch. It is possible to use a laptop or tablet that does not meet these specifications, but this may, at some point, limit the student's ability to use more complex and system intensive software such as: Google SketchUp, Unity 3D, Blender, Gimp, AutoCAD, etc. You may also purchase a more expensive laptop with better hardware, but keep in mind that our young students are taking their laptops with them everywhere and laptops do not tend to last for years when they are banged and dropped in and out of backpacks and lockers. **Therefore, it is highly encouraged to purchase a warranty for the computer that will cover repairs if the machine is damaged.**

Our teachers often incorporate software solutions in their lessons and units, such as Google SketchUp in social studies and language arts. Although our teachers would find alternate methods of instruction and assessment for students that do not have a computer that might not be able to run SketchUp, the student might not be able to participate in the same manner as others in the classroom.

Recommendations for new laptop purchases:

Chromebook

Chromebooks are a great option for our younger students (K-5).

The two main specs to keep in mind when purchasing a Chrombook for school use are:

- RAM - minimum 4 GB
- WiFi- Minimum 802.11ac

PC

Hardware:

- Processor:
 - Minimum - Intel Core i3-5xxx (5th generation)
 - Recommended - Intel Core 5xxxx
 - Alternative - Minimum - Ryzen 3 -3xxx
 - Alternative - Recommended Ryzen 5 -34xx
- RAM: minimum - 4GB: Recommended - 8GB
- Hard Drive:
 - minimum: Mechanical Hard Drive (7200 RPM)
 - Recommended: Solid State Drive (SSD)
- WiFi:
 - Minimum - 802.11ac
 - Recommended - 802.11ac (**must transmit 5 Ghz**)
- Operating System: Recommended - Windows 10 64 - bit

There are many options under \$500 if you look at the refurbished market.

Mac

Hardware:

Apple offers two laptop options MacBook Air and MacBook Pro, each being customizable. Either model will meet the recommendations noted above. If you want a Mac but don't want to pay the price for a new machine, there are some reputable places where you can find a refurbished machine that will work just as well as a fraction of the price.

Linux

If you choose to install Linux on your machine, we will not be able to help you to get connected to the wireless network. Please take this into consideration before installing this operating system.

Software (All operating systems):

Other common software such as a current web browser, Adobe Flash, Java, Office suite (MS Office or Open Office), etc.

Virus protection: This is for all operating systems (including OS X). AVG and Avast. There are over 1,500 devices that connected via our wireless infrastructure every day. You cannot control what they have on their machine but you can work to mitigate any adverse affects that can occur by being on the same network.

About Older Laptops

Lower-end laptops tend to reach their usable timeframe within only 2-3 years of purchase. Any laptop that is still running Windows XP or Vista is probably too old. The number of students who have had hard drives or operating systems that crash, especially older laptops, has been quite substantial in our experience. Although you do not eliminate this possibility with a new laptop, it is at least minimized.

Along those lines, it is HIGHLY recommended that students implement regular file backup, either with an external hard drive, or with a cloud based system such as Google Drive. Google Drive is free on the student's school email account and the capacity is unlimited.

Another thing to consider is purchasing an extra power cord the student can keep at home.

Finally, make sure to **label EVERYTHING computer, external mouse (if purchased), and power cords** as there have been instances where students forget these items when moving about the building and we can quickly identify the owners if they are labeled