EDUCATIONAL ASSIGNMENT for JOSEPH JOHN WUNDERLICH for his 3rd trimester of 10th grade

This assignment covers the following Educational Objectives (Subjects marked with a """ are the main subject, and those marked with an """ are secondary subjects):

- 1. READING (ENGLISH)
- 2. WRITING (ENGLISH)
  - 3. ALGEBRA 2
  - 4. CHEMISTRY
  - 5. WORLD HISTORY6. LATIN II
  - 7. WORLD CULTURAL ARTS
  - 8. PHYSICAL EDUCATION

#### ASSIGNMENT:

Create in a Word document a Proposal for the purchase of a computer to help you with your education for the remainder of the 10<sup>th</sup> grade. You must list criteria to be considered, and provide a discussion of how you compared these criteria in your decision-making process. You may assume that you can use your flat-screen TV as a Monitor, and you should reflect on what your father taught you about decision analyses.

### JOSEPH'S WORK ATTACHED BELOW:

# **PC Proposal**

By Joseph Wunderlich IV

For the continuation of my 10<sup>th</sup> grade school year, I will remain a student to my father who is a professor at Elizabethtown College, Professor Wunderlich, at home. Because of this, I will have to complete all of my work individually. While at my old school I was provided a Lenovo ThinkPad laptop to complete all my work, though I wasn't allowed to take it home to finish assignments. At home, I've been using my mother's outdated Apple Mac book to write word documents and such; I am constantly hindered by it's lacking ability to complete simple tasks without overheating, whether or not this is caused by viruses or just bad/broken components I'd rather not invest time finding out. This laptop I am writing on now, aside from the problems listed above, is graphically unable to run the architectural programs I need such as minecraft, revit, et cetera. I would also require new adapters to display the Macbook's screen on my tv as a monitor. At the moment all I am left with to work on is my father's still working though slowly becoming out of date Dell which his school had given him long ago and probably forgot he still has. I've used his PC for the longest time but as he is now homeschooling me and working his daily job, I am left with few time windows to use the computer.

The base level requirements of what I am searching for in a PC are that of high graphical power.

My personal baseline requirements

- PCU: Any dual core processor, with a clock speed of at least 2.8 Ghz
- **GPU:** Any discrete graphics card with at least a DVI and/or HDMI output, (there are physical limitations to using the integrated graphics instead of using a solid graphics card, minecraft and revit require very high-end graphics capabilities to be used to their fullest potential.)
- Memory: At least 6GB
- Storage: At least 250 GB
- **OS:** Preferably Windows 7, Windows 8 is a useless GUI upgrade. I plan on using some version of Unix anyway, and it would be much easier to get Unix on windows 7 than 8.
- **Internet:** Must have a WLAN card option, I would have to connect a long Ethernet cable through the walls to the modem in my father's room otherwise.
- Price: Under 600 USD

### Minecraft's system requirements [Link]

### Recommended

- CPU: Intel Core i3 or AMD Athlon II (K10) 2.8 GHz
- RAM: 4GB
- GPU: GeForce 2xx Series or AMD Radeon HD 5xxx Series (Excluding Integrated Chipsets) with OpenGL 3.3
- HDD: 1GB
- Latest release of Java 7 from java.com

### Autodesk Revit's system requirements (2014) [Link]

### Performance: Large, complex models

• Windows 8 64-bit Enterprise or Professional edition, or Windows 7 64-bit Enterprise, Ultimate, Professional, or Home Premium edition

- Multicore Xeon or i-Series processor or AMD equivalent with SSE2 technology (highest affordable CPU speed rating recommended)
- Multiple cores for many tasks, up to 16 cores for near-photorealistic rendering operations
- 16 GB RAM (Usually sufficient for a typical editing session for a single model up to approximately 700 MB on disk. This estimate is based on internal testing and customer reports. Individual models will vary in their use of computer resources and performance characteristics.)
- Models created in previous versions of Revit software products may require more available memory for the one-time upgrade process
- 5 GB free disk space; 10,000+ RPM for Point Cloud interactions
- 1,920 x 1,200 monitor with true color
- DirectX 11 capable graphics card with Shader Model 3 as <u>recommended by Autodesk</u>
- Internet Explorer 7 (or later)
- MS-Mouse or 3Dconnexion-compliant device
- Download or installation from DVD9 or USB key
- Internet connectivity for license registration and prerequisite component download

I've been conflicted between buying a laptop or desktop and have come to a conclusion after looking over the facts of each; Here is what I've concluded.

	1/6	5/6
Can it	LAPTOP	DESKTOP
Travel with me in college classes and abroad?	Yes, can easily fit in a suitcase or backpack	No, unless you have a custom-made robot suit
Be used as an excuse to not answer emails while outside the house?	No	Yes
Support the graphical requirements for Minecraft and Revit to run at optimum speeds?	No, usually integrated graphics are the only affordable graphics option	Yes, discrete graphics cards are usually included and can easily be replaced
Properly last long sessions of work?	No, with very little room for cooling systems, all the working components heat up being so close together	Yes, all desktops have room for circulated airflow, modern towers even have liquid cooling
Easily upgrade to next-gen hardware?	Not usually, components must be specially made and are hard to replace.	Yes, towers are can be easily opened up and support a medium for most PC hardware
Save me money in the long run? and Is worth keeping if it breaks down?	No, it is expensive and is only more costly to upgrade or replace, if it breaks down, it is unlikely that leftover pieces can be used in a different brand of laptop	Yes, completely customizable and replaceable, if it breaks down, pieces can be reused in other towers or sold for a good price at a local computer store.

## Option #1: ThinkCentre M78 SSF \$607

- AMD A4-5300 Processor (1MB Cache, up to 3.60GHz) dual-core
- Windows 7 Professional 64
- Windows 7 Professional 64 English
- AMD SFF 240W
- 4GB PC3-12800 DDR3 UDIMM (4GBx1)
- AMD Radeon HD7350 512MB (DVI+DP) Low Profile
- Integrated Audio
- 500GB 7200rpm SATA 6.0Gb/s
- DVD Burner/CD-RW, SATA
- Integrated Gigabit Ethernet
- Wireless WLAN Intel N105 LP
- No Keyboard
- Edge Mouse
- Internal Speakers Small Form Factor
- Publication English
- 3 Year On-site

<u>Lenovo.com</u> Rating: 5.0/5 – 1 review <u>CDW.com</u> Rating: 4.7/5 - 3 reviews <u>Newegg.com</u> Rating: 4.0/5 – 4 reviews

## Option #2: HP Pavilion 500 \$598

- Windows 7 Home Premium 64
- 4<sup>th</sup> Generation Intel® Core<sup>™</sup> i3-4130 processor dual-core [3.4GHz, 3MB Shared Cache]
- 1GB Nvidia GeForce GT625[HDMI,DVI,VGA via adapter]
- 8GB DDR3-1600MHz [1 DIMM ]
- 1TB 7200 RPM SATA Hard Drive
- SuperMulti DVD Burner
- 7-in-1 Memory Card Reader, 2 USB Ports (Front), Audio [Front 2USB3.0]
- No TV Tuner Card
- Integrated Sound, DTS Audio
- HP USB keyboard and optical mouse
- Wireless-N LAN and Bluetooth (1x1)
- HP Home & Home Office Store in-box envelope

<u>HP.com</u> 4.2/5 – 32 reviews <u>Staples.com</u> 3.9/5 – 214 reviews <u>Officemax.com</u> 4.5/5 – 2 reviews





### Bibliography

Windows 8 Predicament:

http://www.zdnet.com/five-reasons-why-windows-8-has-failed-7000012104/

Differences between Intel's i3, 05, and i7 Processors: http://www.pcadvisor.co.uk/buying-advice/pc-components/3417091/whats-difference-between-intel-core-i3-i5-i7/

Mojang's Minecraft system requirements:

https://help.mojang.com/customer/portal/articles/325948-minecraft-system-requirements

Autodesk product system requirements:

http://knowledge.autodesk.com/support/autocad/troubleshooting/caas/sfdcarticles/sfdcarticles/System-requirementsfor-Autodesk-Revit-products.html

Autodesk product system requirements (2014):

http://knowledge.autodesk.com/support/revit-products/troubleshooting/caas/sfdcarticles/sfdcarticles/System-Requirements-for-Autodesk-Revit-2014-Products.html

(All other links are colored blue in titles)

### WHAT WAS PURCHASED:



To:

Wunderlich, Joseph T

• You forwarded this message on 5/5/2014 1:53 AM.

## Items ordered

### **Product details**

HP Pavilion 500t - Win 7 (500-205t) Product number: F9A61AV#ABA Serial number: 2MD41306XK The HP Home & Home Office Store will accept returns or exchanges for this product up to 21 days after delivery

- Windows 7 Home Premium 64
- 4th Generation Intel(R) Core(TM) i5-4570 processor quad-core [3.2GHz, 6MB Shared Cache]
- 1GB Nvidia GeForce GT625[HDMI,DVI,VGA via adapter]
- 10GB DDR3-1600 MHz [2 DIMM ]
- 1TB 7200 RPM SATA Hard Drive
- Microsoft Office Trial
- · Security software trial
- SuperMulti DVD Burner
- 7-in-1 Memory Card Reader, 2 USB Ports (Front), Audio [Front 2USB3.0]
- No TV Tuner Card
- Integrated Sound, DTS Audio
- · HP USB keyboard and optical mouse
- Premium Wireless-N LAN card and Bluetooth(R )(2x2)
- HP Home & Home Office Store in-box envelope

Qty Extended price	
1	\$768.99

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