**Overview**

Work individually to understand and establish the specifications for a PC dedicated to a specific task or application.

My PC application topic Is: Student Home Computer

Answering the student questions will help you to develop a deeper understanding of the main components of a personal computer. It will also help you to identify the features that are most important for your specific PC application topic and the features that are nice to have but are not as critical for your topic.

Preparing a brochure explaining your PC application topic and your selection of personal computer components and features will help you to summarize what you have learned from the student questions. The brochure will also help you to share your findings in a “tradeshow” to be held in class.

The date for the “tradeshow” is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Student Questions**

1. Think about your PC application topic. Do some research to find general answers to the following questions.
   1. How important is computer speed for my topic ( High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application.

You would only need medium speed because a student would only be browsing, using powerpoint/docs or maybe watching videos which don’t require a lot of computer speed.

* 1. How important is data storage for my topic ( High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application.

You would need medium data storage for a student home computer because if they are just downloading documents photos videos etc. which all don’t take up too much storage so they would need a medium amount.

* 1. How important is graphics and sound for my topic ( High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application.

You need medium or low sound and graphics because a student wouldn’t be running games on a computer for school.

* 1. How important is internet connectivity for my topic ( High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application.

You would need medium internet connectivity because if you are watching videos you need good connectivity but not the best and you may be browsing the web which would also need medium connectivity.

1. CPU Processor Chip
   1. What speed of CPU Chip do you require? (High / Medium / Basic)

Basic.

* 1. Provide an example of a high speed CPU using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  2. Provide an example of a medium speed CPU using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

Intel Core i7-9700K Coffee Lake 8-Core 3.6 GHz (4.9 GHz Turbo) LGA 1151 (300 Series) 95W BX80684I79700K Desktop Processor Intel UHD Graphics 630, $499.99

<https://www.newegg.ca/core-i7-9th-gen-intel-core-i7-9700k/p/N82E16819117958?Item=N82E16819117958>

Intel Core i5-9600K Coffee Lake 6-Core 3.7 GHz (4.6 GHz Turbo) LGA 1151 (300 Series) 95W BX80684I59600K Desktop Processor Intel UHD Graphics 630, $309.99

<https://www.newegg.ca/core-i5-9th-gen-intel-core-i5-9600k/p/N82E16819117959?Item=N82E16819117959>

* 1. Provide an example of a basic speed CPU using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features.

AMD RYZEN 7 2700 8-Core 3.2 GHz (4.1 GHz Max Boost) Socket AM4 65W YD2700BBAFBOX Desktop Processor, $219.99.

<https://www.newegg.ca/amd-ryzen-72700/p/N82E16819113498?Item=N82E16819113498>

* 1. What would be the least expensive CPU Chip that meets your requirements? List the Model Number, Price, and Vendor Source.

Intel Core i3-8100 Coffee Lake 4-Core/4-Thread Processor Socket LGA 1151, 3.6 GHz Base 65W Gen8, $159.88, <https://www.canadacomputers.com/product_info.php?cPath=4_65&item_id=112838>

1. RAM Memory
   1. What size of RAM Memory do you require? (Large / Medium / Basic)

Basic.

* 1. Provide an example of a large size RAM using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  2. Provide an example of a medium size RAM using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  3. Provide an example of a basic size RAM using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

OLOy 16GB (2 x 8GB) 288-Pin DDR4 SDRAM DDR4 2666 (PC4 21300) Desktop Memory Model MD4U082616BFDA, $69.99

<https://www.newegg.ca/oloy-16gb-288-pin-ddr4-sdram/p/N82E16820821126?Description=ram&cm_re=ram-_-20-821-126-_-Product>

* 1. What would be the least expensive RAM Memory that meets your requirements? List the Model Number, Price, and Vendor Source.

1. Graphics Card
   1. What graphics speed and resolution do you require? (High / Medium /Basic - On Motherboard)

Basic – On Motherboard.

* 1. Provide an example of a high-end Graphics Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  2. Provide an example of a medium-end Graphics Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  3. What would be the least expensive Graphics Card that meets your requirements (or do you just need Basic graphics provided by the motherboard)? List the Model Number, Price, and Vendor Source.

MSI B450-A PRO AM4 AMD B450 SATA 6Gb/s USB 3.1 HDMI ATX AMD Motherboard, $139.99

<https://www.newegg.ca/p/N82E16813144192>

Only need basic graphics from motherboard.

1. Sound Card
   1. Do you require special sound support? (High / Medium /Basic - On Motherboard)

Basic – On Motherboard

* 1. Provide an example of a high-end Sound Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  2. Provide an example of a medium-end Sound Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  3. What would be the least expensive Sound Card that meets your requirements (or do you just need basic sound provided by the motherboard)? List the Model Number, Price, and Vendor Source.

MSI B450-A PRO AM4 AMD B450 SATA 6Gb/s USB 3.1 HDMI ATX AMD Motherboard, $139.99

<https://www.newegg.ca/p/N82E16813144192>

Basic sound from motherboard.

1. Motherboard
   1. Do you require any special motherboard features (based on your answers to the above questions)?

No.

* 1. Provide an example of a high-end Motherboard using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  2. Provide an example of a basic Motherboard using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
  3. What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source.

MSI B450-A PRO AM4 AMD B450 SATA 6Gb/s USB 3.1 HDMI ATX AMD Motherboard, $139.99

<https://www.newegg.ca/p/N82E16813144192>

1. HDD (Hard Disk Drive or Solid State Drive)
   1. Do you require any special Hard Disk Drive features (based on your answers to the above questions)?
   2. Provide an example of a high-end HDD using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
   3. Provide an example of a basic HDD using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
   4. What would be the least expensive Hard Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source.

Seagate BarraCuda ST3000DM007 3TB 5400 RPM 256MB Cache SATA 6.0Gb/s 3.5" Hard Drives Removable Media (DVD / USB / Flash), $95.99

<https://www.newegg.ca/p/1Z4-002P-008Y2?item=1Z4-002P-008Y2&source=region&nm_mc=knc-googleadwordsca-pc&cm_mmc=knc-googleadwordsca-pc-_-pla-_-hard+drives-_-1Z4-002P-008Y2&gclid=EAIaIQobChMIhOn-96am5QIVE8pkCh0lXgXFEAQYBSABEgIw_vD_BwE>

* 1. Do you require any special Removable Media features? Explain what extra features are required for your PC application topic.

The student would probably need a removable Usb so I chose a hard drive with that feature.

* 1. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

1. Network Interface (Ethernet /Fiber / Wi-Fi / Bluetooth)
   1. Do you require any special Network Interface features? Explain what extra features are required for your PC application topic.

No.

* 1. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

1. Monitor, Mouse, Keyboard
   1. Do you require any special Monitor, Mouse, Keyboard, etc. add-ons? Explain what extra features are required for your PC application topic.
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

AmazonBasics USB Wired Computer Keyboard and Wired Mouse Bundle Pack, $19.99

<https://www.amazon.ca/AmazonBasics-Wired-Keyboard-Mouse-Bundle/dp/B00B7GV802/ref=sr_1_15_sspa?gclid=EAIaIQobChMI-s_G4q6m5QIVA8ZkCh0YFglwEAAYASAAEgLsFvD_BwE&hvadid=229978694574&hvdev=c&hvlocphy=9000839&hvnetw=g&hvpos=1t1&hvqmt=e&hvrand=2007856283710494417&hvtargid=kwd-26959266&hydadcr=1505_10289887&keywords=mouse+and+keyboard&qid=1571420833&s=electronics&sr=1-15-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUFJSFo0Rkg1T1NMNU0mZW5jcnlwdGVkSWQ9QTA2MTExMTUyS1pWV1VRRzc5VVROJmVuY3J5cHRlZEFkSWQ9QTAyMDcxMTFUUlVFNThFMVRZNUImd2lkZ2V0TmFtZT1zcF9tdGYmYWN0aW9uPWNsaWNrUmVkaXJlY3QmZG9Ob3RMb2dDbGljaz10cnVl>

1. Portability / Mobility
   1. Will you be using your PC in one place, do you need some portability, or do you need a high degree of mobility? Explain the need for portability your PC application topic.
   2. Do you require a Desktop / Laptop / Notebook or other PC format?

You could buy a laptop if you are usually need one outside or you could buy a pc if you only need it at home. You could even buy both so you always have access to a computer.

* 1. How will this affect the cost of your dream machine.

It won’t affect it.

1. Rank each personal computer component in order of priority (1-lowest, 10-highest) based on your research above. Each component must have its own priority number… no duplications.
   * CPU Processor Chip 1 2 3 4 5 6 7 8 9 10
   * RAM Memory 1 2 3 4 5 6 7 8 9 10
   * Graphics Card 1 2 3 4 5 6 7 8 9 10
   * Sound Card 1 2 3 4 5 6 7 8 9 10
   * Motherboard 1 2 3 4 5 6 7 8 9 10
   * HDD (Hard Disk Drive or Solid State Drive) 1 2 3 4 5 6 7 8 9 10
   * Removable Media (DVD / USB / Flash) 1 2 3 4 5 6 7 8 9 10
   * Network Interface (Ethernet /Fiber / Wi-Fi / Bluetooth) 1 2 3 4 5 6 7 8 9 10
   * Monitor, Mouse, Keyboard 1 2 3 4 5 6 7 8 9 10
   * Portability / Mobility 1 2 3 4 5 6 7 8 9 10

**Brochure**

Work individually to create a 4 page brochure according to the following guideline.

**Page 1 – Your Application Topic**

Describe your topic and the top PC components for your topic.

Include the following on this page:

* Describe your application topic and how a PC is used
* In general terms, describe what the best PC for this application would look like (e.g. speed vs portability)
* Describe in more detail the top three most important PC components and explain why they are important for your application

**Page 2 – Would-Be-Nice Features**

Describe your decisions about what PC components are less important but would be nice to upgrade if you had the money.

Include the following on this page:

* Describe the would-be-nice components (just below your top 3 priorities) and what your options for upgrading them would be.
* Describe the components / features at the bottom of your priority list and why you would not spend extra money on them.
* Provide some details about different vendors / suppliers and the options they offer.

**Page 3 – Your Budget Machine**

Your budget is $800. Select a pre-packaged PC or customize / build a PC from parts to fit under this budget.

Include the following on this page:

* Your PC specs, model, cost, vendor, etc.
* Priority components that you were able to include for this price.
* Priority components that you had to leave out because of budget limitations.

**Page 4 – Your Dream Machine**

Your budget is $2000. Select a pre-packaged PC or customize / build a PC from parts to fit under this budget.

Include the following on this page:

* Your PC specs, model, cost, vendor, etc.
* Priority components that you were able to include for this price.
* Priority components that you were able to spend extra on.
* Also comment on any priority components that you had to leave out or down-grade.

**Appendix A: PC Vendors, Parts, & Customization**

Suggested on-line computer sources:

* [www.newegg.ca](http://www.newegg.ca)
* [www.dell.com/en-ca](http://www.dell.com/en-ca)
* [www.tigerdirect.ca/](http://www.tigerdirect.ca/)
* [www.canadacomputers.com](http://www.canadacomputers.com)

**Appendix B: Application Topics**

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| --- | --- |
| **Task** | **Student Name** |
| ***Game Computer*** |  |
| **Photo Editing & Organization** |  |
| ***Business Office Computer*** |  |
| ***Student Home Computer*** |  |
| ***Factory Floor Computer*** |  |
| ***Media Production and Streaming Computer*** |  |
| ***Web Surfing Computer*** |  |
| ***Game Computer*** |  |
| **Photo Editing & Organization** |  |
| ***Business Office Computer*** |  |
| ***Student Home Computer*** |  |
| ***Factory Floor Computer*** |  |
| ***Media Production and Streaming Computer*** |  |
| ***Web Surfing Computer*** |  |
| ***Game Computer*** |  |
| **Photo Editing & Organization** |  |
| ***Business Office Computer*** |  |
| ***Student Home Computer*** |  |
| ***Factory Floor Computer*** |  |
| ***Media Production and Streaming Computer*** |  |
| ***Web Surfing Computer*** |  |