**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 ( Medium)? Justify your answer using examples of how a computer is used to perform a task related to your application.

Medium because a student home computer is going to be used for writing documents and

the speed is fairly important as students use these computer for everything but since they just need to do searches and writes essays. They need the speed to be decent so everything opens quickly as everything mostly relies on Wi-Fi.

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

Medium because most of the stuff is saved online.

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

Its not important at all because your not gaming or watching any videos.

* 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.

High because you are using the wifi all the time

2.       CPU Processor Chip

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

 Medium since I will be needing to do many things at the same time and I will be doing things that require a decent amount of speed.

b.       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 feature.

An example of one of the best CPU’s out right now is the Intel Core i7-9700K Coffee Lake 8-Core/8-Thread Processor which is $499.99 on Canadacomputers.com. It has incredible performance and is extremely fast.

c.        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

An example of a medium speed CPU is the AMD Ryzen 5 2600x which is $209.99 on Newegg. It has fast single core performance, and a very high speed.

* 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

  An example of a basic speed CPU is the AMD Ryzen 3 2200G on Newegg. It has decent speed and is affordable for people who want a cheap CPU.

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

The cheapest CPU chip that would meet my requirements would be the AMD Ryzen 3 2200G 4 Core/4 Thread Processor on canadacomputers.com for 109.99

 3.       RAM Memory

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

    Medium ram memory because I use my computer for many things and not just school work

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

An example of a large size ram would be the Corsair Vengeance RGB PRO 32GB (2x16GB) DDR4 2666MHz CL16 DIMM 1.2V on canadacomputer.com for $224 it is very fast, and it looks very nice with its led lights.

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

An example would be the Corsair Vengeance RGB PRO 16GB (2x8GB) DDR4 3000MHz CL15 DIMM 1.35V (CMW16GX4M2C3000C15) on canadacomputers.com for 129.99. It is fairly fast and is cosmetically nice.

1. 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

# **An example would be the G.SKILL Ripjaws X Series 8GB DDR3 1600MHz CL10 DIMM (F3- 12800CL10S-8GBXL) it has decent speed and is very cheap coming in at $44.99**

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

The least expensive ram that would meet my requirements would be the Crucial 4GB which is $25.30 on Newegg.

4.       Graphics Card

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

Basic because I don’t need to run any games on my computer unless its used for everything.

b.       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

Nvidia GeForce RTX 2080 Ti

-          Price: 1484.99 on Newegg

-          High fps 4k gaming

-          Spear heading ray tracing revolution

c.        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

AMD Radeon RX 5700

-          Price: $459.99 on Newegg

-          Excellent performance

-          Affordable

d.       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.

I think that I only need the graphics card provided by the motherboard.

5.       Sound Card

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

Baisc

b.       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

Creative Sound Blaster Z

-          Price: $134.85 on Amazon

-          Surround sound

-          Great for gaming

c.        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

Creative Sound Blaster Audigy FX 5.1 Sound Card SB1570

-          Price: 46.99 on Amazon

-          Affordable

-          Good for the price

d.       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.

Basic sound card provided by the motherboard

6.       Motherboard

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

No

b.       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

GIGABYTE B360N WiFi

-          Price: $156.94 on Amazon

-          Socket 1151/Support 8th Gen Intel Core processors

-          Dual Channel Non-ECC Buffered DDR4

-          New hybrid Digital PWM Design

-          Intel Cavil 802. 11ac Wave2 2T2R WIFI

-          High quality Audio Capacitors and Audio Noise Guard

c.        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

GIGABYTE GA-A320M-S2H

-          Price: $74.99 on Newegg

-          AMD A320

-          Supports AMD Ryzen 1st & 2nd Generation/ Ryzen 2000 Series / AMD 7th Generation A-series/ Athlon Processors

-          DDR4 3200(O.C.)/ 2933(O.C.)/ 2667/ 2400/ 2133 MHz memory modules

d.       What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source.

GIGABYTE GA-A320M-S2H

-          Price: $74.99 on Newegg

-          AMD A320

-          Supports AMD Ryzen 1st & 2nd Generation/ Ryzen 2000 Series / AMD 7th Generation A-series/ Athlon Processors

-          DDR4 3200(O.C.)/ 2933(O.C.)/ 2667/ 2400/ 2133 MHz memory modules

7.       HDD (Hard Disk Drive or Solid State Drive)

a.       Do you require any special Hard Disk Drive features (based on your answers to the above questions)?

No

b.       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

Toshiba X300

-          $172.99 on Newegg

-          Massive storage

-          High speeds

c.        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

Seagate BarraCuda

-          Price: $57 on Amazon

-          Low cost

-          Fast spinning disks

d.       What would be the least expensive Hard Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source.

WD Desktop Blue

-          Price: $64 on Newegg

8.       Removable Media (DVD / USB / Flash)

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

I will need USB ports

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

Included in computer already

9.       Network Interface (Ethernet /Fiber / Wi-Fi / Bluetooth)

a.       Do you require any special Network Interface features? Explain what extra features are required for your PC application topic.

I just need wifi for my work

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

Wifi is already built in the computer

10.    Monitor, Mouse, Keyboard

a.       Do you require any special Monitor, Mouse, Keyboard, etc. add-ons? Explain what extra features are required for your PC application topic.

I will need a basic monitor, mouse and keyboard.

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

Monitor:  BenQ GL2760H

-          $178.99 on Amazon

Mouse: Rosewill optical mouse

-          $4.99 on Newegg

Keyboard: Amazon Basics Wired Keyboard

-          $18.58 on Amazon

11.    Portability / Mobility

a.       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.

My pc might need mobility as I might take it to school or other places to work on things.

b.       Do you require a Desktop / Laptop / Notebook or other PC format?

I require a laptop or a notebook.

c.        How will this affect the cost of your dream machine.

Yes because it will be cheaper if I buy a laptop or notebook than a desktop

12.    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**

|  |  |
| --- | --- |
| **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*** |  |