**Level 1: PC Tower Case**

**Outline**

Learn about the internals of a standard PC case by examining physical samples and selecting and labeling images found on-line. Gain deeper knowledge by researching and reporting on specific components.

**Questions**

1. Find one (or more) images that clearly show the internals of a PC Tower Case.   
   (i.e. Google images using keywords “PC Case Internals”)
2. Clearly label the following components (using arrows) on your image of the PC case internals:
   1. Motherboard
   2. Power Supply
   3. Hard Disk Drive
   4. Optical Disk Drive (e.g.DVD)
   5. USB Expansion Ports
   6. Monitor Port
   7. Audio Ports
   8. Ethernet Port
   9. Cooling Fan
3. Research more in-depth about “Motherboards”. Make notes on the following:
   1. What different versions are currently available (speed and capacity)

* The different versions are AT, Baby AT, ATX, Mini-ATX, Micro-ATX, Flex ATX, LPX and Mini LPX and NLX.
* Speeds can range from 60 Mhz to over 800Mhz
  1. How the component has changed since the 1980
* Faster speed
* Ability to hold more capacity
* More sustainability

1. Research more in-depth about “Hard Disk Drives”. Make notes on the following:
   1. What different versions are currently available (speed and capacity)

* Parallel Advanced Technology Attachment (PATA)
* Serial ATA (SATA)
* Small Computer System Interface (SCSI)
* Solid State Drives (SSD)
  1. How the component has changed since the 1980’s
* Now it doesn't require much room as it did before
* Don’t need serveral storage devices to make it work
* Less bigger
* Faster
* Better
* Not that expensive as it was before

**Level 2: PC Motherboard**

**Outline**

Learn about the structure of a standard PC motherboard by examining physical samples and selecting and labeling images found on-line. Gain deeper knowledge by researching and reporting on specific components.

**Questions**

1. Find one (or more) images that clearly show the layout of a PC Motherboard.   
   (i.e. Google images using keywords “PC Motherboard”)
2. Clearly label the following components (using arrows) on your image of the PC motherboard:
   1. CPU (and fan)
   2. RAM Memory
   3. Disk Drive Interface (IDE or SATA)
   4. GPU Graphics Processor (either on-board or Graphics Card)
   5. Sound Processor (either on-board or Sound Card)
   6. Wi-Fi / Ethernet Network Interface (either on-board or Graphics Card)

1. Research more in-depth about “CPU Processor Chip”. Make notes on the following:
   1. What different versions are currently available (speed and capacity)

* AMD Sempron. The AMD Sempron processor is designed to meet the needs of home and business PC users. ...
* AMD Athlon 64 X2 Dual-Core. ...
* AMD Athlon 64. ...
* AMD Opteron. ...
* Intel Celeron D. ...
* Intel Pentium 4. ...
* Intel Pentium D. ...
* Intel Pentium 3 (Pentium III)
* Intel core i5
* Intel core i7
* And many more.
  1. How the component has changed since the 1980’s  
     -More Faster Speed

-Faster load times

-More physical memory

-Can hold more ram

1. Research more in-depth about “RAM Memory”. Make notes on the following:
   1. What different versions are currently available (speed and capacity)

* Many different types of Ram sticks, the most popular RAM sticks are
* Corsair Vengeance LED
* Kingston HyperX fury
* RGB RAM: HyperX Predator DDR4 RGB. ...
* Low-Profile RAM: Corsair Vengeance LPX. ...
* Mac RAM: G.Skill Mac RAM.
  1. How the component has changed since the 1980’s
* Contains more GB(More VRAM)
* More memory for RAM
* Allows you to do more things at once
* Helps CPU performance more.

**Level 3: Peripheral Devices**

**Outline**

Learn about how peripheral devices are connected to the back side of a typical PC tower case. Examine physical samples, select and labeling images found on-line and gain deeper knowledge by researching and reporting on specific components.

**Questions**

1. Find one (or more) images that clearly show the layout of the back of a typical PC tower case.   
   (i.e. Google images using keywords “Back Of PC Tower”)
2. Clearly label the following components (using arrows) on your image of the back of a typical PC tower case:
   1. Power cord and power switch
   2. Monitor Interface (VGA or DVI or HDMI)
   3. Mouse Interface (USB or PS/2)
   4. Keyboard Interface (USB or PS/2)
   5. USB Ports
   6. Audio Inputs / Outputs
   7. Ethernet Interface

1. Research more in-depth about “Monitor Technology”. Make notes on the following:
   1. What different versions are currently available (e.g. VGA / DVI, Flat Panel Technology)

* HDMI
* Gigabit Video Interface
* EGA
* OpenLDI
* Display Port
* MHL(Mobile High Link)
  1. How the component has changed since the 1980’s (e.g. Display Resolution, Technology)
* Higher Resolution
* Better Quality
* Thinner
* More portable
* Does not take up a lot

1. Research more in-depth about “External Portable Storage”. Make notes on the following:
   1. Floppy Disks

* That reads storage information
* Was one of the first types of storage devices that could read or write
  1. CD-ROM / DVD / Recordable CD/DVD
* CD ROM is a disc that contains data
* Combat Disc can only read memory.
  1. USB Memory Drives
* Used to upload/download content.
* Can store content in it.
* Used to transfer digital content/
  1. Compact Flash Memory
* Mainly used for portable electronic devices
  1. Cloud-Based Storage
* Stored online
* Stored on servers
* Managed and hosted by a company