



Vocabulary

bits, byte, control-click, copy, CPU, gigabyte, kilobyte, megabyte, paste, RAM, ROM, terabyte, URL, Wordle, word cloud

Content

Let us learn some basic computer vocabulary and then let us use it with WORDLE to make an interesting graphic.

CPU: The **CPU** is the Central Processing Unit that resides on one or more chips inside the computer. Each chip is a grid of silicon wires encased in a plastic container about the size of a fingernail. Although there are other chips involved and this is an oversimplification, it works well to think of the CPU as the central component of your system. It functions the way your brain functions, coordinating the activities of the other devices. Although computers with vacuum tubes go back to 1946, the first microprocessor-- i.e. computer on a chip-- was invented by Ted Hoff from Intel Corp in 1971.

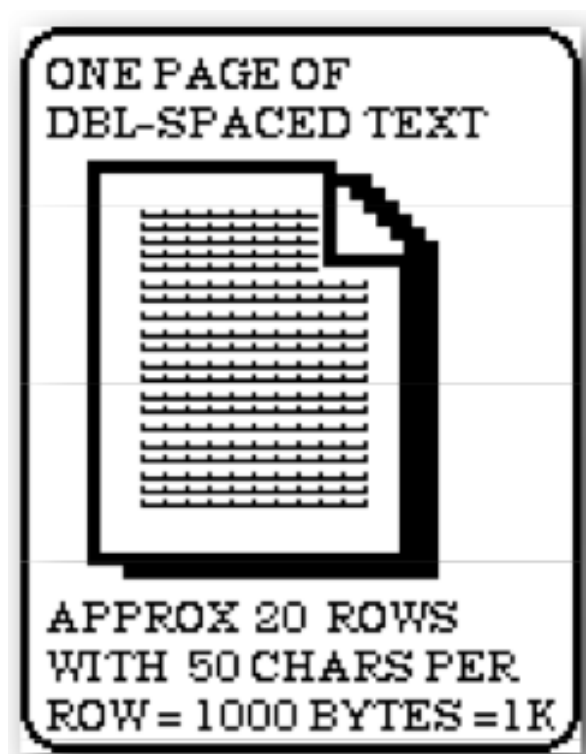
Another important chip-- the **RAM** chip-- is always blank when the electricity is off. When you start up a computer and begin to work, the information you type as well as the program that is in process all fit inside of RAM. When people refer to a 2 gig computer, they are referring to the size of the RAM capacity. RAM stands for Random Access Memory. A typical Mac or Windows computer now comes with four gigabyte of RAM; older Macs and PCs in the early 1990s came with 1 meg of RAM. In the mid 1980s, typical computers had about 1/8 of a meg of RAM (128K) and very primitive graphics. A typical iPad has 16 or 32 gigabytes of RAM.

Gordon Moore, former CEO of INTEL gets credit for what is now called “Moore's Law” — chip power doubling roughly every 2 years and costs falling by 50%.

ROM chips are crucial to the computer, but not very interesting to us as consumers. A ROM chip typically contains “frozen” information (fairly technical, esoteric stuff) that the manufacturer wants accessible at all times. BASIC, however, was built into ROM on the Apple II so that if you turned on that CPU without a disk drive, you could actually start programming. ROM stands for Read Only Memory. ROM chips are found not only in computers; many appliances and even toys contain ROM chips. In fact, the singing bass, Big Mouth Billie, contains a ROM chip.

Both the computer chip and the disk drive store information that is coded electronically.

The basic unit of information is the **Byte** which is equivalent to one character or one keystroke. For example, the word “Hello” is a 5 byte word. Because spaces are just as significant as letters, “New York” is one 8 Byte word, which is the way most New Yorkers say it anyway. In fact, it is very useful in teaching or learning word processing to realize that Space Bar and Return each constitutes 1 Byte; you might say that the computer alphabet has 29 letters: A-Z, Space Bar, Tab and Return. Use the “show invisibles” command in your word processor to see all of these 29 letters!



1000 BYTES = 1 **K**: How many BYTES on a piece of paper? Well, a good approach is to consider double-spaced text with wide margins. For example, you might have 50 characters across the page, with a total of 20 lines down. Therefore, we have 20 X 50 bytes or 1000 bytes on the page. Computer people refer to 1000 bytes as 1 **Kilobyte** and then abbreviate it as 1 **K**.

Each byte is made of 8 bits which are the 1's and 0's that are on-off switches. So if one byte is 8 bits, then my name (Steve) is 5 bytes or 40 bits. For example, my name ends with "e" which is 01000101 inside the RAM chip where each "1" represents electricity on and each "0" represents electricity off. Each "1" or "0" represents 1 bit which actually stands for binary digit: **B**inary digi**T**.



summercore

Just as 1000 bytes equals 1 kilobyte (1K), 1 million bytes (1000K) is 1 **Megabyte** (usually pronounced **MEG**) and 1 billion bytes (1000 megabytes) is 1 **Gigabyte**.

Hard disks range from 16 to 500 gigabytes or more. CDs hold up to 650,000K, which we call 650 meg or over 1/2 a Gigabyte. In Spring of 1998, Bill Gates launched the TerraServer project — a database of satellite pictures (terraserver.com) of the world. The Web server contains over 1 terabyte (“of the terra”) stored in a database of 173.6 million rows. One **Terabyte** contains 1,000 gigabytes (about 1500 CDs).

Other basic words and concepts for lesson 1. We always begin with vocabulary!

COPY and PASTE are always under EDIT, but you must learn the shortcuts to make me happy. I keep them on the back of my business card and you might like to have a copy. Some of you use a Mac and some use a PC in this course.

MAC KEYSTROKE TIPS

Why not tape to your laptop?

⌘ SZA=save undo select all

⌘ XCVP=cut copy paste print

⌘ OPTION then ESC=FORCE QUIT

⌘ CTRL then Reset = RESTART

CTRL and CLICK to simulate

RIGHT MOUSE CLICK on PC

SHIFT CLICK to mean THROUGH

⌘ Click to mean ALSO

⌘ + or - changes text size
within some Web browsers

⌘ SHIFT then 4 to invoke
SCREEN SNAPSHOT

OPTION 8\$P generates • ¢ Π

SHIFT OPTION K generates 🍏

which is now same as ⌘ key

print more: www.summercore.com/tips

PC KEYSTROKE TIPS

Why not tape to your laptop?

CTRL SZA=save undo select all

CTRL XCVP=cut copy paste print

CTRL ALT DEL = FORCE QUIT

ALT to use underlined letters


RIGHT MOUSE CLICK gives
additional options on that item

SHIFT CLICK to mean THROUGH

CTRL Click to mean ALSO

CTRL + or - changes text size
within some Web browsers

PRINT SCREEN captures what is on
screen, then paste it into a doc or into
PAINT which is within ACCESSORIES

WINDOWS  =START MENU

print more: www.summercore.com/tips



Are you a Mac user? Then it is COMMAND C and COMMAND V.

Are you a PC user? Then it is CONTROL C and CONTROL V.

Remember that when we speak on the phone, I am going to quiz you just on these two! V can stand for Velcro, by the way. Steve

By the way, there is a special mouse click that you also need to know. On the PC, it is right mouse click. On the Mac, it is CTRL and click. This is also essential info I will go over on the phone or skype with you. My phone time or skype time with you each week is to both quiz you and teach you!

Finally, you need to know what URL means? This is the web address that frequently starts with http:// but that is never required. In fact, the www is never required! You can go to nytimes.com or bu.edu without typing the www or the http.

Videos to watch (most of these are one minute and should launch when you click)
In general the www is optional

BYTE: tinyurl.com/sc011sc

KILOBYTE: tinyurl.com/sc017sc

MEGABYTE: tinyurl.com/sc016sc

GIGABYTE: tinyurl.com/sc012sc

TERABYTE: tinyurl.com/sc013sc

RAM: tinyurl.com/sc015sc

ROM: tinyurl.com/sc018sc

REVIEW1: tinyurl.com/sc014sc (4 minutes)

REVIEW2: tinyurl.com/sc009sc (7 minutes)



Homework

First, I want you to know that you all are creating together a WIKI of vocabulary words and concepts, week by week. A wiki is a shared document that everyone contribute to. The most famous example of course is Wikipedia. Ours won't be that famous but it will contain an alphabetical summary of all the words and concepts we cover in our 10 lessons.

I will add the words each week and it is your job to go to the webpage and either type some answers in or improve the writing of what is there. The website is tinyurl.com/sconlineplunge

Assignment 1A: Read this handout

Assignment 1B: Watch the videos previously listed

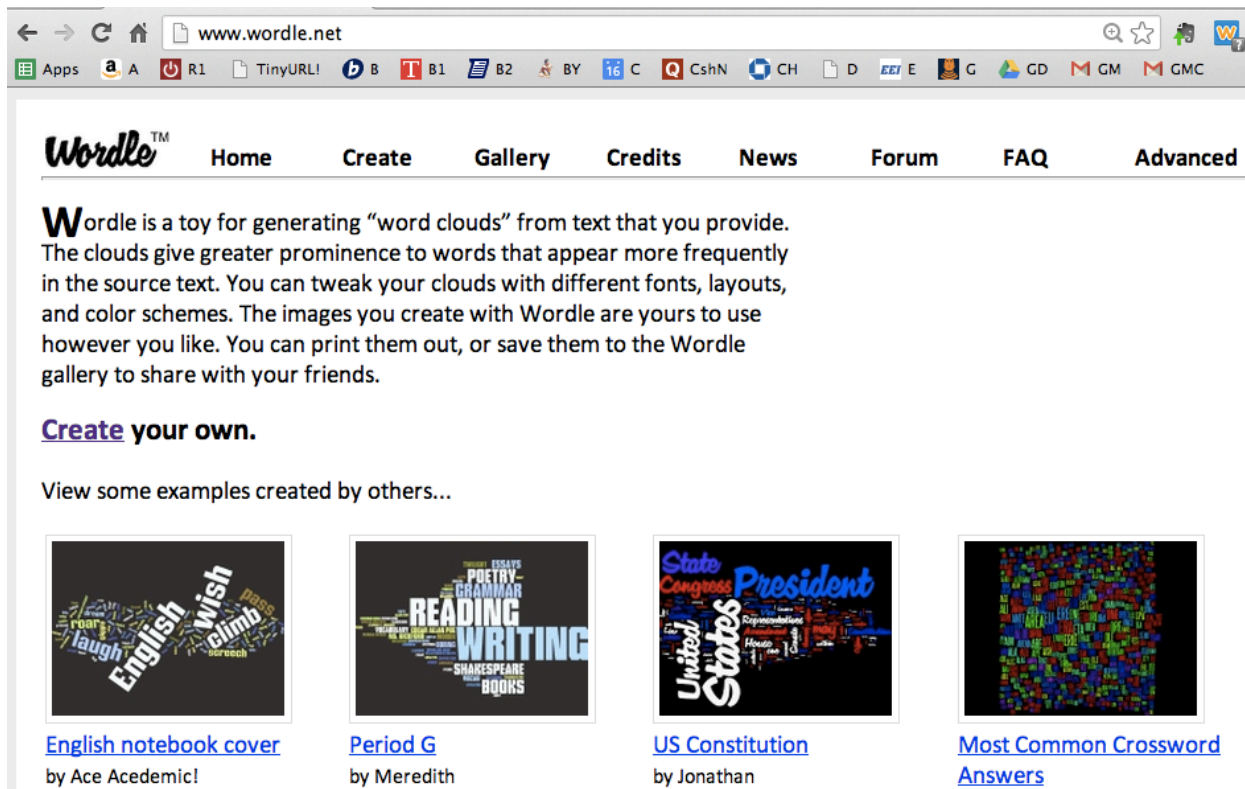
Assignment 1C: Schedule a 30 minute phone call or skype with me

Assignment 1D: Please contribute to our WIKI located at the tinyurl.com/sconlineplunge webpage. You can either type some answers or helpful info about a few items or you can ask a question or you can improve the writing of someone else. You will love the fact that others are contributing to this (including me) and that this will be a summary at the end of our 10 weeks of important info in alphabetical order!

Assignment 1E: Make a Wordle graphic and send to me as an attached file

Use WORDLE -- an online, Web 2.0 program that lets you make neat designs with words. The web site is not wordle.com so be careful. Rather, it is wordle.net and looks like you see on the next page.


Please note that I leave out the www in all my websites since that is generally optional. So is the http:// that takes extra time to say or to type.



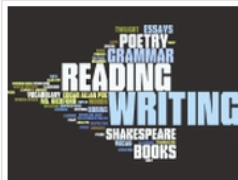
Wordle is a toy for generating “word clouds” from text that you provide. The clouds give greater prominence to words that appear more frequently in the source text. You can tweak your clouds with different fonts, layouts, and color schemes. The images you create with Wordle are yours to use however you like. You can print them out, or save them to the Wordle gallery to share with your friends.

Create your own.


View some examples created by others...



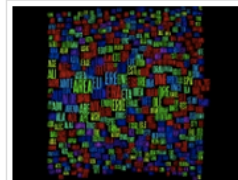
[English notebook cover](#)
by Ace Acedemic!



[Period G](#)
by Meredith

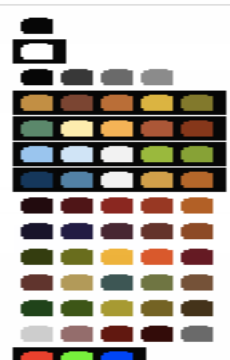


[US Constitution](#)
by Jonathan



[Most Common Crossword Answers](#)

The left side shows one of the fancy things you can do with the words in the Wordle graphic. You can make them have round or straight edges. You can make them be horizontal or vertical. You can make them be half and half or alphabetical order. The right side shows the different color schemes you can use!

Maximum words...	Recolor
Prefer Alphabetical Order	BW WB Ghostly Indian Earthy Firenze Chilled Summer Blue Meets Orange Kindled Shooting Star Organic Carrot Milk Paints Moss Heat yramirP
<input checked="" type="checkbox"/> Rounder Edges Straighter Edges	
<input checked="" type="checkbox"/> Any Which Way Horizontal Mostly Horizontal Half and Half Mostly Vertical Vertical	Custom Palette Edit custom palette... <input checked="" type="checkbox"/> Exact Palette Colors <input checked="" type="checkbox"/> A Little Variation Some Variation Lots of Variation Wild Variation



Here are the skills and tricks with this cool online program that makes a "word cloud." When you choose CREATE you start from scratch.

You type in multiple words with some being repeated. The more repetitions, the larger the size the word will be in the final graphic. That is why I have kilobyte twice but megabyte three times and gigabyte four times, etc.

Please use COPY and PASTE to repeat certain words or the shortcuts with C (copy) and V (velcro). I will help you with that on the phone or skype if you like.

[Home](#)[Create](#)[Gallery](#)[Credits](#)[News](#)

Paste in a bunch of text:

byte kilobyte kilobyte megabyte megabyte megabyte gigabyte gigabyte gigabyte gigabyte terabyte
terabyte terabyte terabyte terabyte ram rom

When you choose GO, you get your graphic. Then you can play with the FONT and LAYOUT and COLOR. This is a lot of fun.

Useful Trick? Before choosing GO, it is a good idea to SELECT ALL then COPY. Why? This way if you want to modify, you can just PASTE and edit.

Once you make your graphic, I would like you to PRESERVE it and send it to me as an attached file. This involves taking a screen snapshot on your Mac or PC. These are important steps that can be frustrating so I will give you this lesson on phone or skype this week if you like.

You will find info on taking a screen snapshot on the web page of summercore.com/tips

summercore

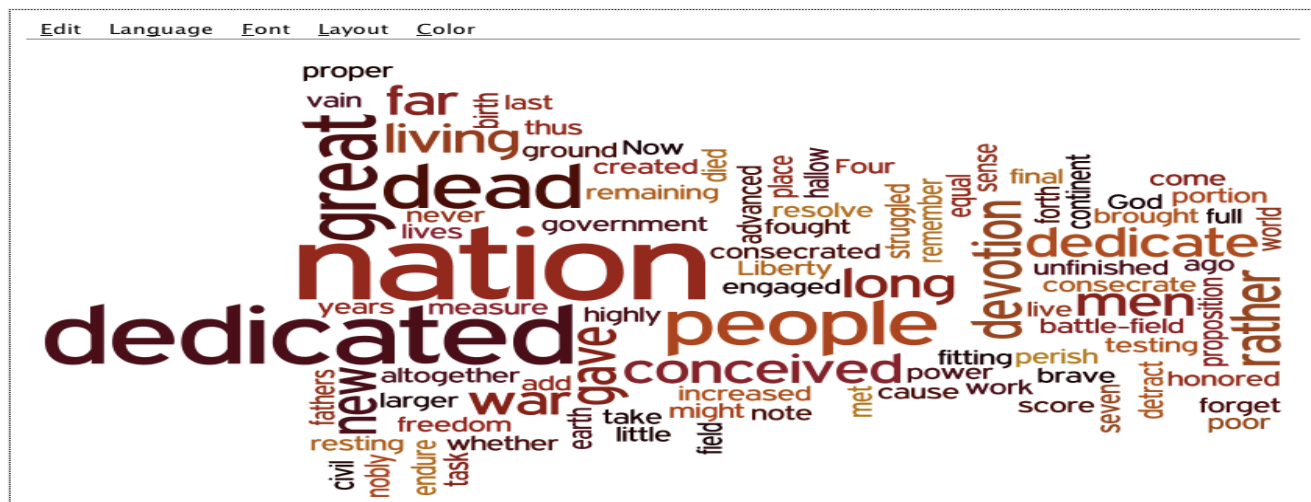
Wordle™ Home Create Gallery Credits News Forum FAQ Advanced

Edit Language Font Layout Color

A Wordle puzzle where the words are arranged to form the shape of a computer mouse. The words are: TERABYTE (vertical, orange), GIGABYTE (vertical, yellow), KILOBYTE (vertical, black), MEGABYTE (horizontal, yellow), ROM (vertical, orange), and RAM (horizontal, orange). The word 'BYTE' is shared between TERABYTE and GIGABYTE.

OR

Wordle™ **Home** **Create** **Gallery** **Credits** **News** **Forum** **FAQ** **Advanced**





Have a good week! I look forward to our 30 minute talk.

Steve



phone = 781-953-9699

skype name = stevebergen (no spaces)

Email = sbergen33@gmail.com