

# REMINDER

- 7:00 AM – 7:20 AM Homeroom - *In class before 7:00 AM*
- 7:20 AM – 9:00 AM First Class
  - **9:00 AM – 9:20 AM Break**
- 9:20 AM – 11:00 AM Second Class
  - **11:00 AM – 11:10 AM Break**
- 11:10 AM – 11:50 AM Third Class
  - **11:50 AM – 12:30 PM Lunch**
- 12:30 PM – 1:40 PM Third Class continued
  - **1:40 PM – 1:50 PM Break**
- 1:50 PM – 3:30 PM Fourth Class

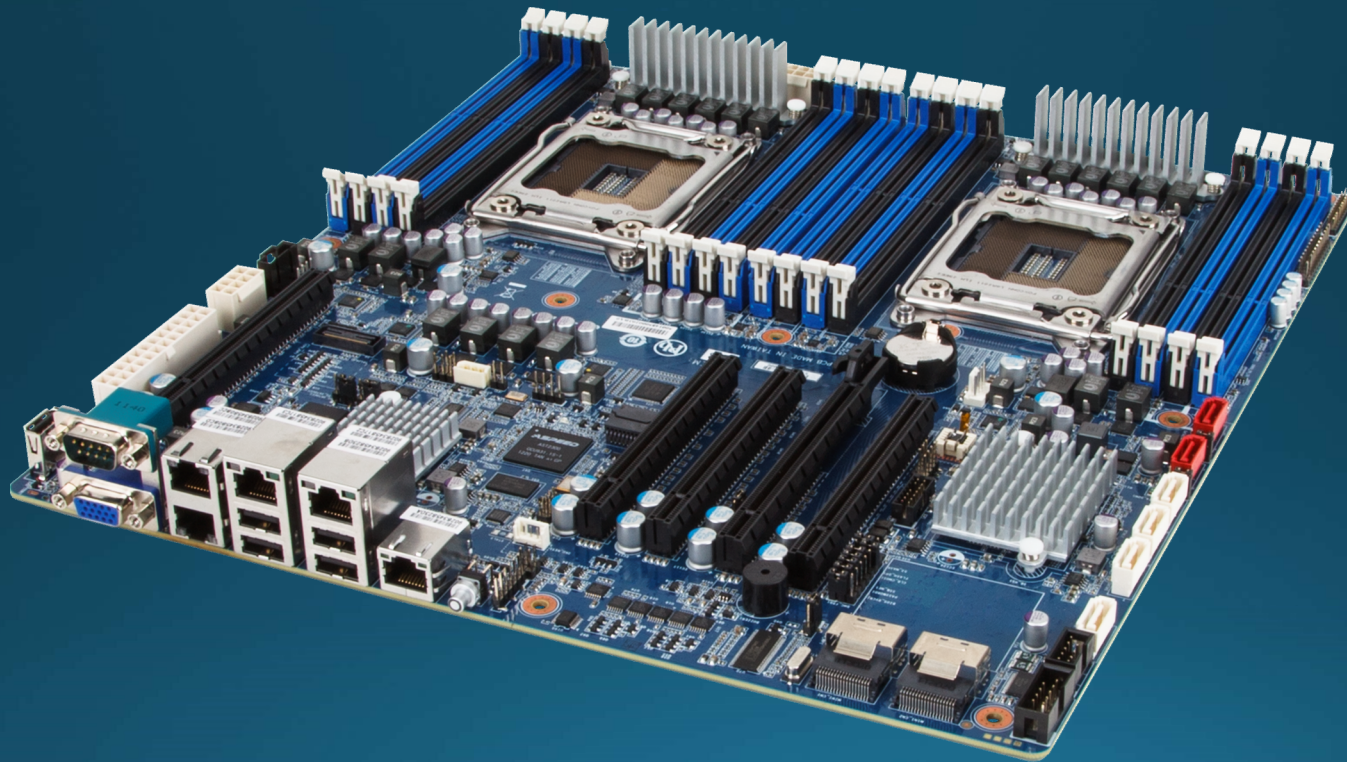


*bits and Bytes – Pieces and Parts*

# Computers Hardware



# Computer Hardware



# bits & Bytes

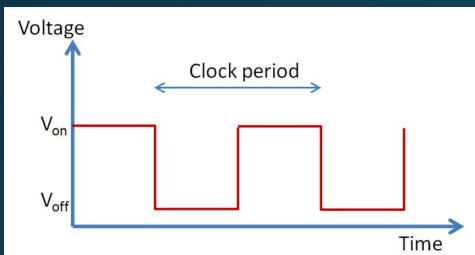
- **bit** is short for binary digit. ("1" or a "0")
- **Byte** is made up of 8 bits. Each byte represents a character (10101011).
  - 1,000 Bytes = **k**ilobyte
  - 1,000,000 Bytes = **M**egabyte
  - 1,000,000,000 Bytes = **G**igabyte
  - 1,000,000,000,000 Bytes = **T**erabyte
  - 1,000,000,000,000,000 Bytes = **P**etabyte



# How Fast is Your Computer?



- Clock speed is a measure of how quickly a computer completes basic computations and operations and is measured as a frequency in Hertz (Hz).

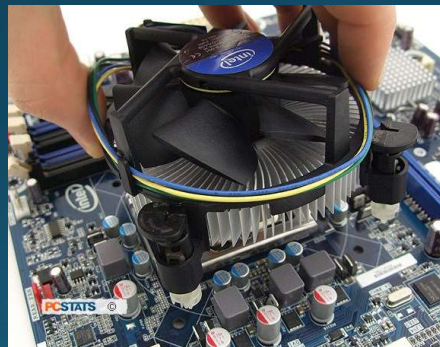
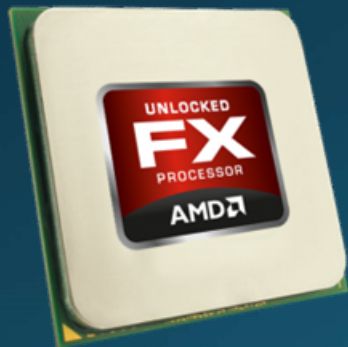


- **Megahertz (MHz)** is one million cycles per second
- **Gigahertz (GHz)** is one billion cycles per second.
- *Ex: 2.8 GHz computer is running at 2,800,000,000 cycles per second.*



# Microprocessor / Processor / CPU

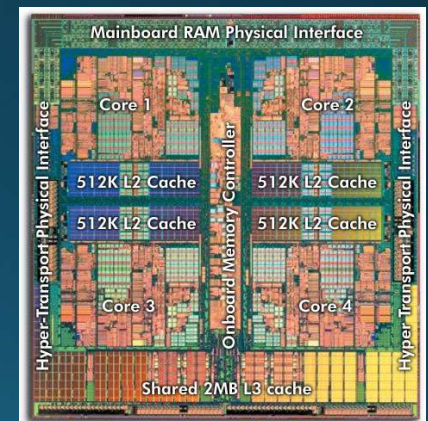
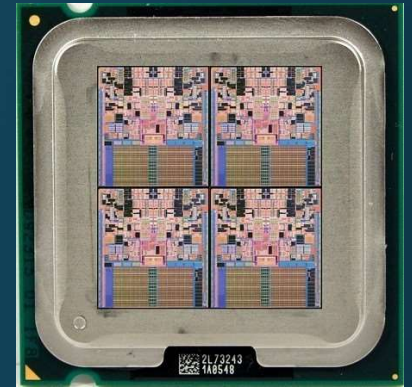
- These terms refer to the main part of the computer that does the actual work (the brain of the computer). The three terms are interchangeable.



*CPU stands for Central Processing Unit.*

# CPU Technical Specs

- **Speed** - The clock speed (frequency) of a CPU is how many instructions per second it can process and is typically reported in MHz or GHz. EX: A 3GHz processor can complete 3,000,000,000 instructions per second.
- **# of Cores** - A multi-core processor is a single computing component with two or more independent actual processing units (called "cores"), which are units that read and execute program instructions at the same time.
- **Power (watts)** – A CPU designed for a laptop will use less power to conserve battery usage and will cost more than a similar one designed for a desktop.



<https://www.pugetsystems.com/labs/articles/Specs-Explained-CPU-137/>



# 32-Bit vs 64-Bit CPU

32-Bit



64-Bit



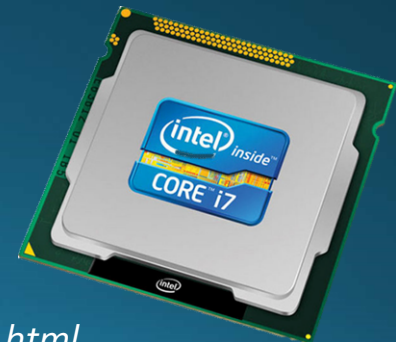
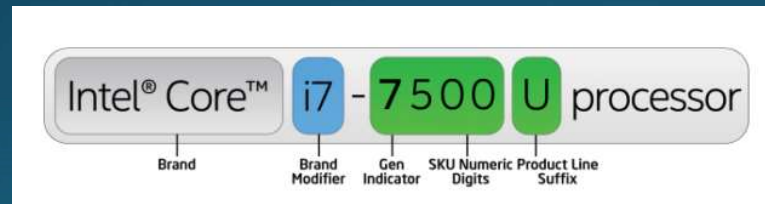
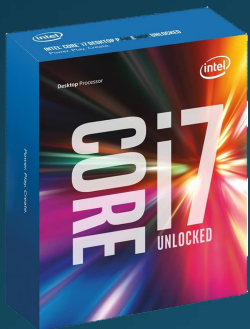
- 64-bit processors can perform more calculations per second than 32-bit, which affects the speed at which they can complete tasks
- 32-bit computers support a maximum of 3-4GB of memory, whereas a 64-bit computer can support memory amounts over 4 GB.



# Pick Your Flavor of CPU

- Intel

- **Celeron** - Support basic consumer applications, HD video and audio, and web browsing with reliable performance and high value.
- **Pentium** - Accelerate portable 2-in-1s, laptops, desktops, and all-in-ones with a feature-packed processor.
- **Core (i3, i5, i7, i9)** - Manage 3D, advanced video, and photo editing, play complex games, and enjoy hi-res 4K displays.
  - **Generation** – Typically identified by the first number after the core type:
    - Gen 2: 2x00, Gen 3: 3x00, Gen 6: 6x00, etc.



<https://www.intel.com/content/www/us/en/products/processors/core.html>



# Pick Your Flavor of CPU

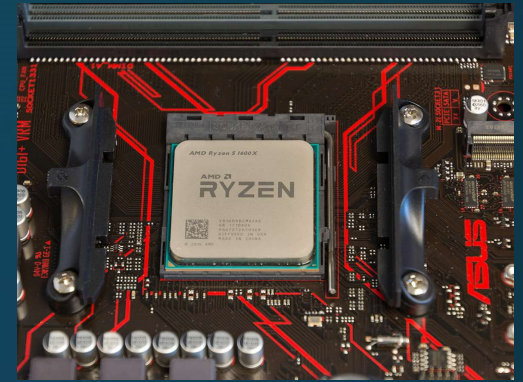
- AMD

- **FX** - AMD FX™ processors deliver the highest clocks you can get on a consumer desktop PC, with at least twice the cores and more cache memory than comparably-priced competition.
- **Sempron -> Athlon -> A-Series -> FX -> Ryzen**
- AMD allows for clock speed to be played with

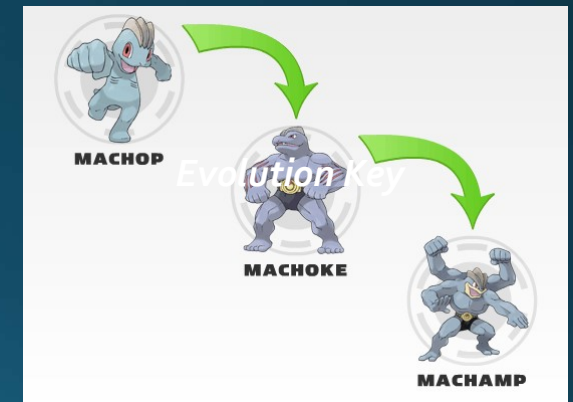
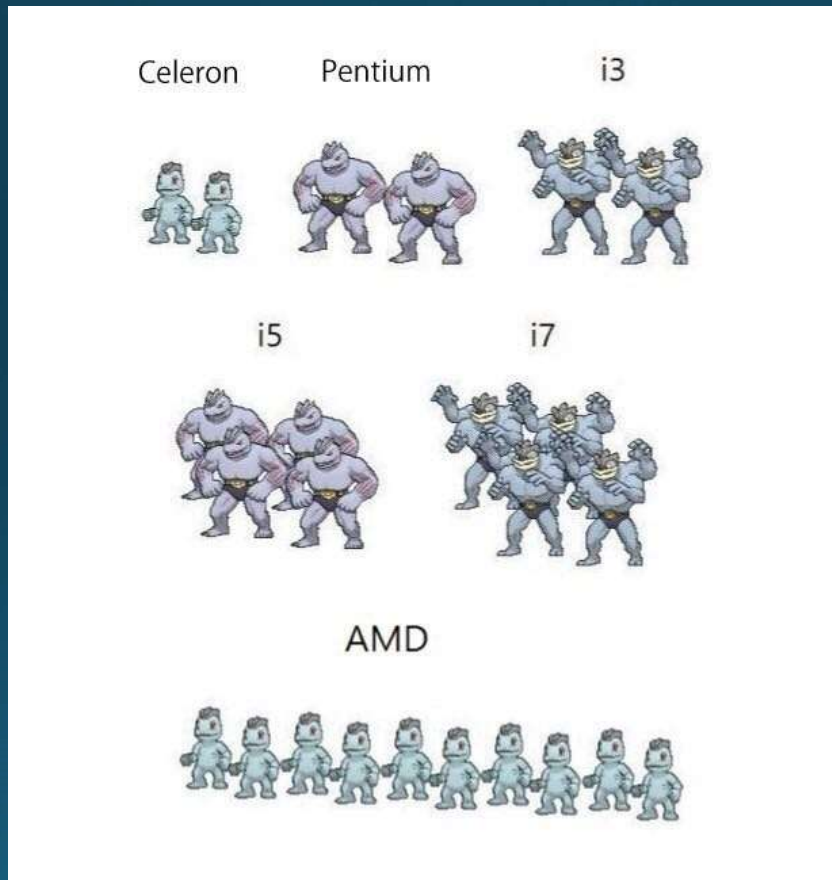
<http://www.amd.com/en-us/products/processors/>

<https://www.digitaltrends.com/computing/amd-vs-intel/>

*June 2, 2018*




# Intel vs. AMD – *Pokémon Style*



# Intel vs. AMD – *Real World*

Select your product ×



**Inspiron Desktop (AMD)**  
Starting at \$429.99

Discover a world of possibilities.

**New Inspiron Desktop (Intel)**  
Starting at \$449.99

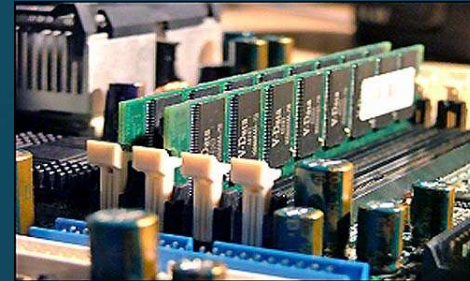
Discover a world of possibilities.

*Dell.com June – 2017*



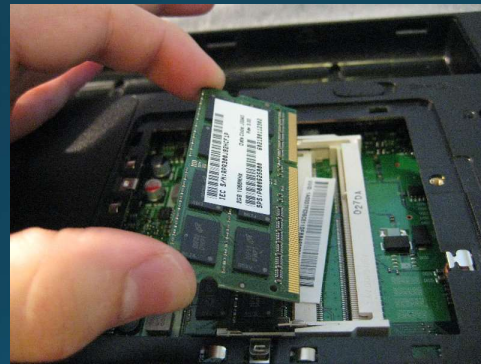
# Computer Memory

- **RAM** is **R**andom **A**ccess **M**emory
- It is the physical work area that programs use to operate
- The bigger the workbench the more tools / things you can use / do at one time

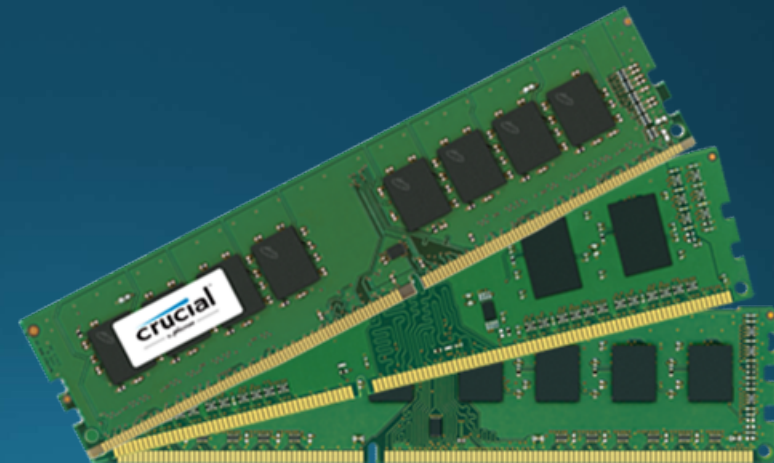


# Computer Memory

Laptop RAM



Desktop RAM



# Computer Memory

PCX-XXXXX



Buffered /  
Unbuffered

SRAM - DRAM

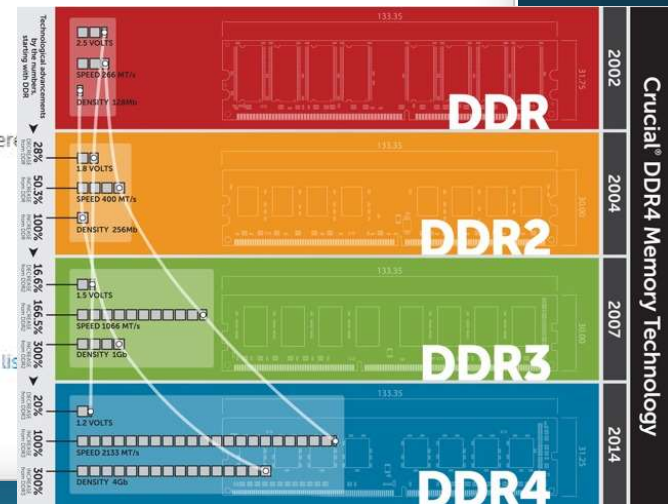
## Ballistix Sport 4GB DDR3-1600 UDIMM

BLS4G3D1609DS1S00

- Brand: Ballistix
  - Form Factor: UDIMM
  - Total Capacity: 4GB
  - Warranty: Limited Lifetime
  - Specs: DDR3 PC3-12800 • 9-9-9-24 • Unbuffered
  - Series: Ballistix Sport
- view all product details
- ★★★★★ 93 reviews

ECC /  
Non-ECC

Add to wish list



<http://www.crucial.com/usa/en/systemscanner>



# Computer Memory

- **RAM** is volatile memory, which means save your work!!! Everything in RAM is gone when you Shut Down, experience a Power Loss or System Crash.
- Save your work frequently.



Your PC ran into a problem that it couldn't handle,  
and now it needs to restart.

You can search for the error online: KERNEL\_DATA\_INPAGE\_ERROR (MsfS.SYS)





# Computer Memory

**Cache Memory** - A type of RAM

## CPU

- Use to store program instructions that are frequently re-referenced by software during operation.
- Fast access to these instructions increases the overall speed of the software program.

## Disk Cache / Buffer

- Stores recently access data
- No need to access the spinning desk for every Read – *Slower*

## Video memory

- Shared vs. dedicated



# Storage – Where is my STUFF?



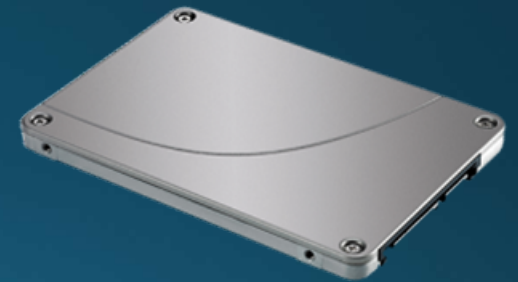
Files and Folders



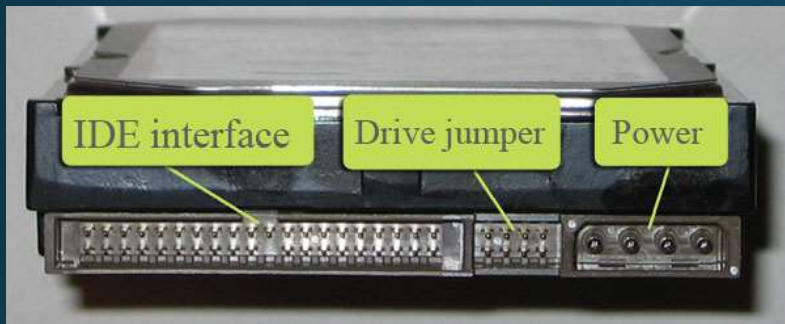
Software and Apps

# Traditional Storage – Hard Drive / Disk

- Can be internal or external
- Kilobytes, Megabytes, Gigabytes, Terabytes and now... Petabytes!
- Connection types: IDE / SATA / mSATA
- Transfer Speeds
- RPM
- Cache Size
- Solid State – SSD



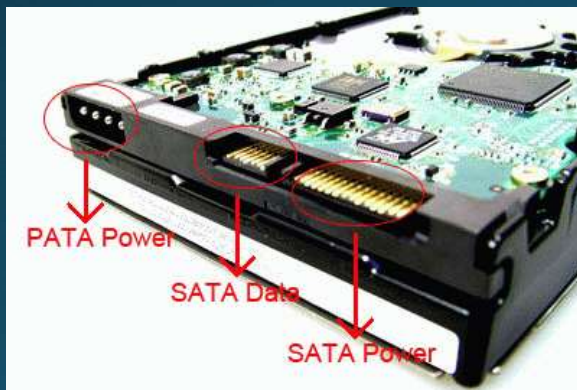
# Traditional Storage – Hard Drive / Disk Connection Types



IDE / PATA



micro SATA  
uSATA

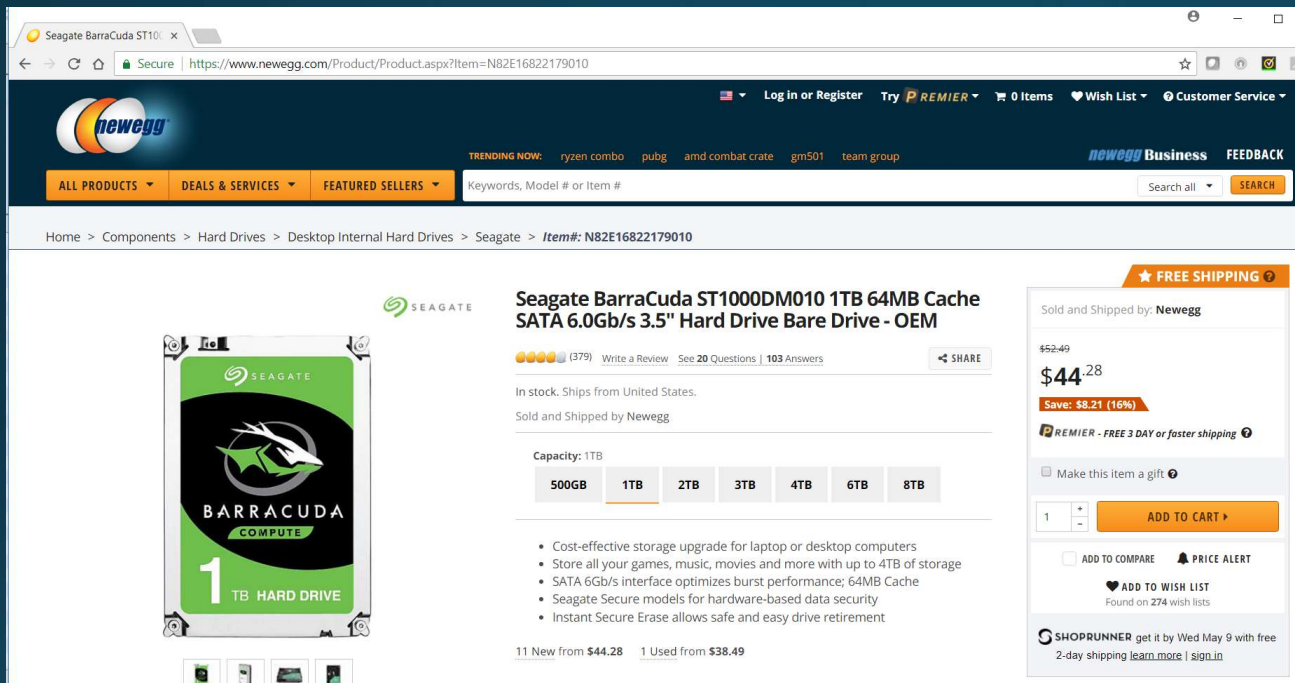


SATA

mSATA



# Spinning Disk – Characteristics



The screenshot shows the Newegg product page for the Seagate BarraCuda ST1000DM010 1TB 64MB Cache SATA 6.0Gb/s 3.5" Hard Drive Bare Drive - OEM. The page includes the Newegg logo, navigation menus, and a search bar. The product image shows a green and black hard drive with the BarraCuda logo. The price is \$44.28, with a save of \$8.21 (16%) from the original price of \$52.49. The page also features a 'FREE SHIPPING' badge, a 'REMIER - FREE 3 DAY or faster shipping' badge, and a 'SHOPRUNNER' badge. The product is sold and shipped by Newegg.

Seagate BarraCuda ST1000DM010 1TB 64MB Cache SATA 6.0Gb/s 3.5" Hard Drive Bare Drive - OEM

Capacity: 1TB

500GB 1TB 2TB 3TB 4TB 6TB 8TB

- Cost-effective storage upgrade for laptop or desktop computers
- Store all your games, music, movies and more with up to 4TB of storage
- SATA 6Gb/s interface optimizes burst performance; 64MB Cache
- Seagate Secure models for hardware-based data security
- Instant Secure Erase allows safe and easy drive retirement

11 New from \$44.28 1 Used from \$38.49

Sold and Shipped by Newegg

FREE SHIPPING

Sold and Shipped by: Newegg

\$52.49  
**\$44.28**  
Save: \$8.21 (16%)

REMIER - FREE 3 DAY or faster shipping

Make this item a gift

1 ADD TO CART

ADD TO COMPARE PRICE ALERT

ADD TO WISH LIST  
Found on 274 wish lists

SHOPRUNNER get it by Wed May 9 with free 2-day shipping [learn more](#) | [sign in](#)

- Capacity: 1TB
- 7200 RPM
- SATA 6Gb/s
- 64 MB Cache
- 3.5" Format

[www.newegg.com](http://www.newegg.com) – May 2018



# SSD / Flash

The screenshot shows the Newegg website product page for a WD Blue 3D NAND 1TB PC SSD. The page features the Newegg logo at the top left, a navigation menu with categories like 'ALL PRODUCTS', 'DEALS & SERVICES', and 'FEATURED SELLERS', and a search bar. The product title is 'WD Blue 3D NAND 1TB PC SSD - SATA III 6 Gb/s 2.5"/7mm Solid State Drive - WDS100T2B0A'. The price is listed as \$249.99, with a current price of \$247.78. The page also includes a 'FREE SHIPPING' badge, a 'REMIER - FREE 3 DAY or faster shipping' badge, and an 'ADD TO CART' button. The product image shows the SSD with the 'WD BLUE' logo and '1TB 3D NAND SATA SSD Solid State Drive' text. The page also includes a 'Write a Review' section and a 'SHARE' button.

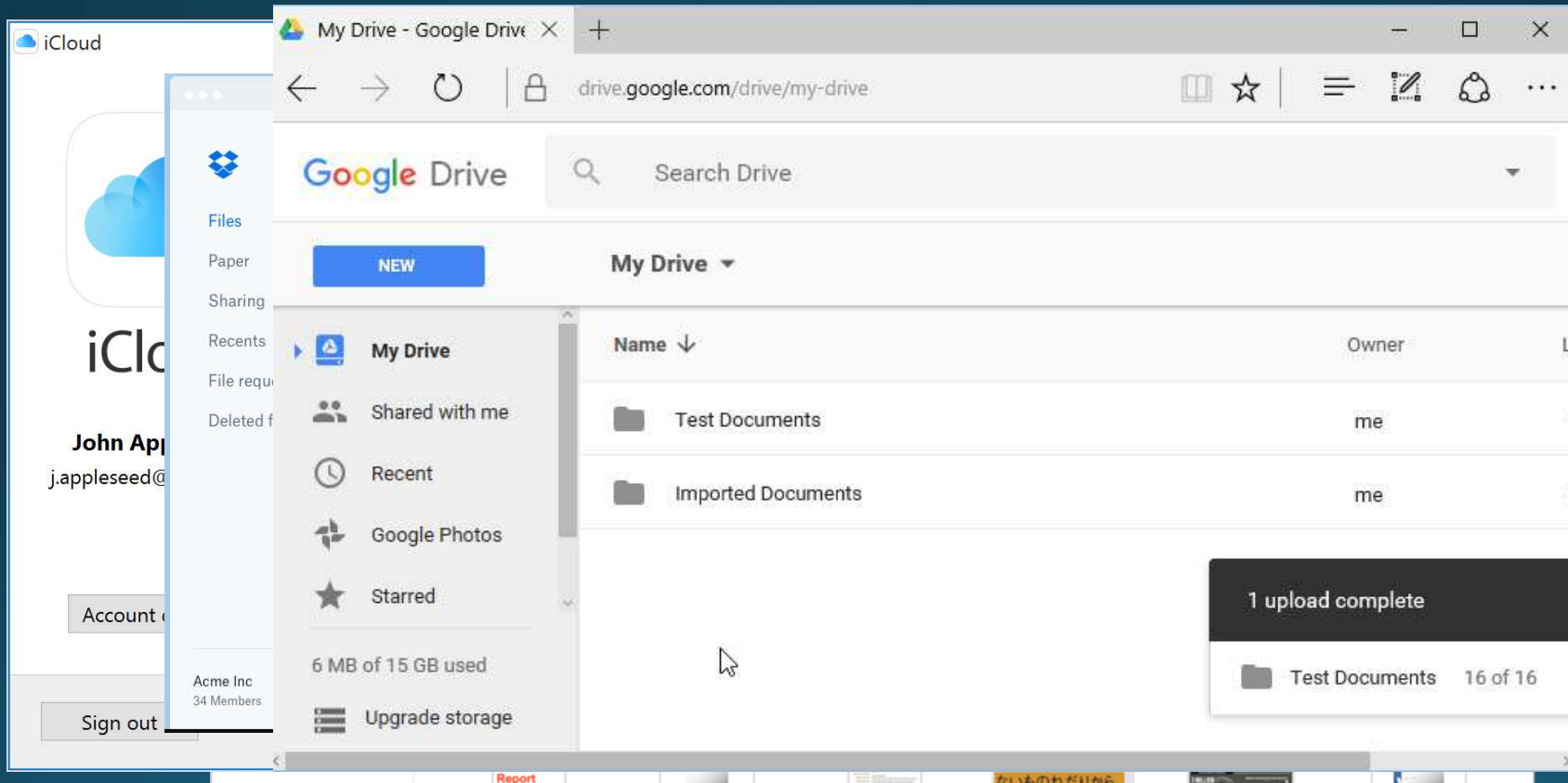
- Capacity: 1TB
- SATA III 6Gb/s
- 2.5" Format

- 
- No "Cache"
  - No "RPM"

[www.newegg.com](http://www.newegg.com) - May 2018




# Back Up Your Stuff!!!!



# USB Flash Drive

- Also referred to as a **USB drive, USB stick, thumb drive, pen drive, jump drive, flash-drive or USB memory**
- GB (\$) to TB (\$\$\$)

**STAPLES** Printed materials that wow.  
Whatever you need, we can help.



**Verbatim 5PK 8GB PinStripe USB 2.0 Red, Blue, Green, Purple, Teal**

Item : 1913050 / Model : 99146

★★★★★ (63) [Add to Favorites](#)

- PinStripe USB drive makes transporting and sharing files simple
- The drive features a slim retractable design
- Compatible with Windows 8

**\$37.99**  
5/Pack

1 [ADD TO CART](#)




<http://www.staples.com> May 2018





# The Endpoint

An endpoint device is an Internet-capable computer hardware device on a **TCP/IP network**. The term can refer to desktop computers, laptops, smart phones, tablets, thin clients, printers or other specialized hardware such as POS terminals and smart meters.

The image features a collection of digital devices. In the foreground, there is a laptop with a blue screen displaying a database icon. To its left, a tablet and a smartphone are also shown with blue screens and database icons. In the background, a tall server rack is visible. The entire scene is set against a dark blue gradient background.

<http://whatis.techtarget.com/definition/endpoint-device>



# The Endpoint - Desktop



# The Endpoint - All-in-One



# The Endpoint - Laptop



# The Endpoint - Tablet



# The Endpoint - Tablet (MS Surface)

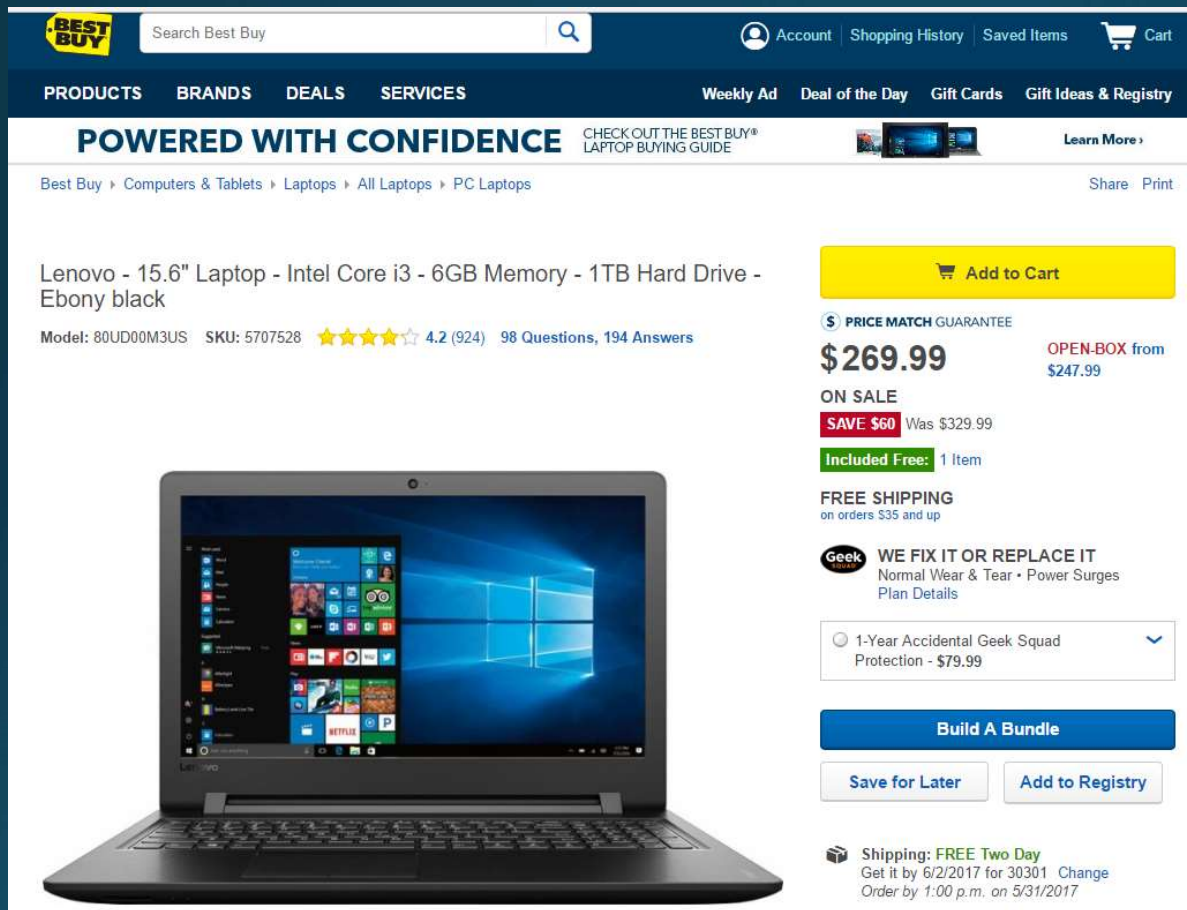


# The Endpoint - Chromebook

- Chromebooks are special laptops running a version of Linux that are essentially “Browsers-in-a-box”
- As inexpensive as \$75.00
- It’s only application is the Chrome Browser
- Can run any “cloud-based” application. (As long as it works in Chrome)
- MUST HAVE AN INTERNET CONNECTION



# Laptop example – June 2017



The screenshot shows the Best Buy website interface for a Lenovo laptop. The top navigation bar includes the Best Buy logo, a search bar, and links for Account, Shopping History, Saved Items, and Cart. Below this is a secondary navigation bar with categories like PRODUCTS, BRANDS, DEALS, and SERVICES, along with promotional banners for Weekly Ad, Deal of the Day, Gift Cards, and Gift Ideas & Registry. The main content area features a breadcrumb trail: Best Buy > Computers & Tablets > Laptops > All Laptops > PC Laptops. The product title is "Lenovo - 15.6\" Laptop - Intel Core i3 - 6GB Memory - 1TB Hard Drive - Ebony black". Below the title, the model number (80UD00M3US) and SKU (5707528) are listed, along with a 4.2-star rating from 924 reviews and 98 questions with 194 answers. A large yellow "Add to Cart" button is prominent. To the right of the button, a "PRICE MATCH GUARANTEE" badge is visible. The price is displayed as \$269.99, marked as "ON SALE" with a "SAVE \$60" badge, indicating a reduction from the original price of \$329.99. An "OPEN-BOX" price of \$247.99 is also shown. Below the price, it states "Included Free: 1 Item" and "FREE SHIPPING on orders \$35 and up". A "Geek Squad" badge offers a "WE FIX IT OR REPLACE IT" warranty for normal wear and tear, power surges, and plan details. A dropdown menu shows the option for "1-Year Accidental Geek Squad Protection - \$79.99". At the bottom of the product details, there are buttons for "Build A Bundle", "Save for Later", and "Add to Registry". A shipping notice at the very bottom states "Shipping: FREE Two Day" with a delivery date of 6/2/2017 for zip code 30301, and a deadline to order by 1:00 p.m. on 5/31/2017. On the left side of the product page, there is a large image of the laptop, which is open and displaying the Windows 10 desktop environment.

- 6th Gen Intel® Core™ i3-6100U mobile processor
- 6GB system memory
- 1TB hard drive for ample file storage space - 5400 rpm spindle speed
- Intel® HD Graphics 520
- 15.6" display - LED backlight
- 1 USB 3.0 port
- HDMI output
- Bluetooth 4.0
- Wireless network
- Windows 10





# Desktop example – June 2017

Inspiron Desktop (Intel)


Discover a world of possibilities.

Extensive storage and exceptional power in an innovative design that saves you space, without sacrificing performance.

Starting at \$449.99

★★★★★ 1 Reviews

[Add to Cart](#)



Tech Specs & Customization | [Features](#) | [Ratings & Reviews](#) | [Drivers, Manuals & Support](#)

Tech Specs & Customization Inspiron Desktop (Intel)  
[Components](#) | [Support & Services](#) | [Software & Accessories](#) [View all configurations](#)

[Components](#)

Processor: 7th Generation Intel® Core™ i3-7100 processor (3MB Cache, up to 3.90 GHz)

Operating System: Windows 10 Pro makes protecting and accessing your personal PC and important files easy, whether

Inspiron Desktop (Intel)	
Market Value	\$499.99
Total Savings	\$50.00
Standard Delivery	Free
<b>Dell Price</b>	<b>\$449.99</b>


[Financing](#)

- 7th Gen Intel® Core™ i3-7100U mobile processor
- 8GB, 2400MHz, DDR4; up to 16GB
- 1TB (64MB Cache) 7200 RPM SATA 6Gb/s
- Intel® HD Graphics 630 with shared graphics memory
- DVDRW Optical drive
- 6 USB (2 usb 3.0)
- Ethernet port
- Dell Wireless 1707 Card 802.11bgn + Bluetooth 4.0
- HDMI output
- No Display
- Windows 10



# Monitor example – June 2017

Dell™ 22" Widescreen LED Monitor, Black, SE2216HV Item # 459935  
★★★★★ (42) | Description | Share | Print



\$149.99 each (Reg)  
**\$99.99 Sale** (Save \$50)  
Limit: 5

Add Accidental Coverage (Recommended) ⓘ

square frade 2 Year Protection \$15.99

Free delivery  
Estimated delivery 1-3 business days

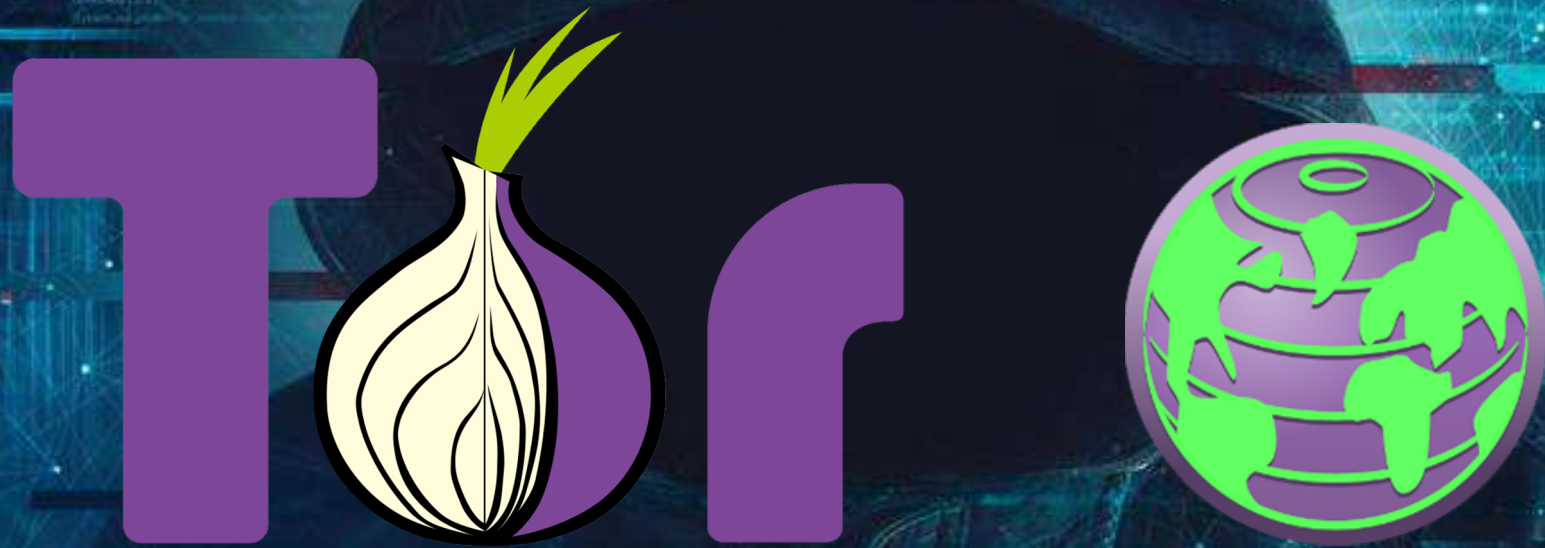
Pick Up In 1 Hour ⓘ  
Sold in stores  
Check your store availability

- 22" screen
- Full HD (1920 x 1080) resolution in a 16:9 widescreen format.
- Tilts 5° forward or 21° backward to your preferred viewing position

# The Browser




To Surf the Dark Web.....

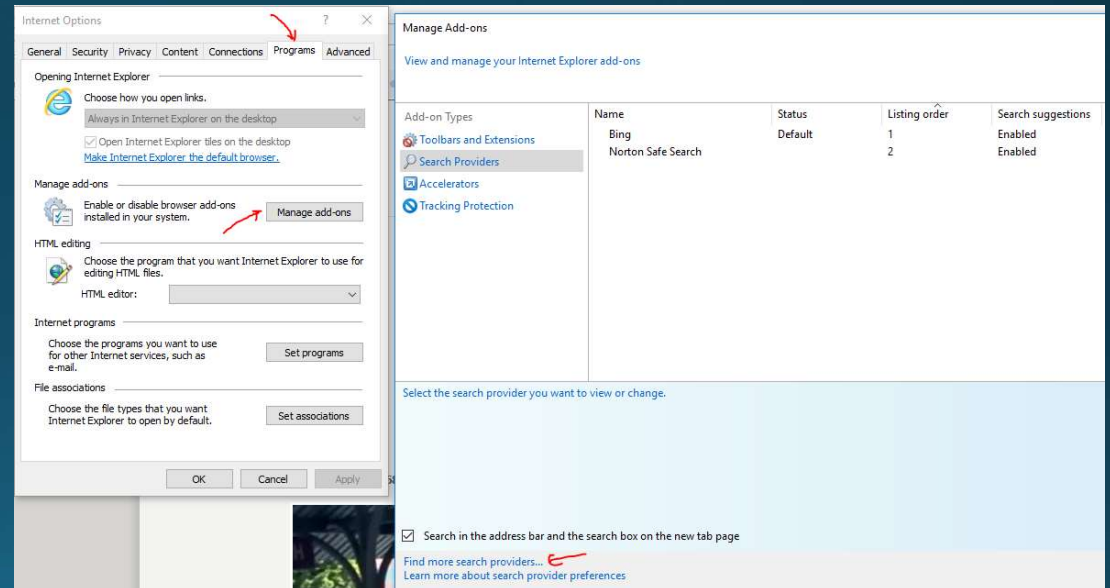
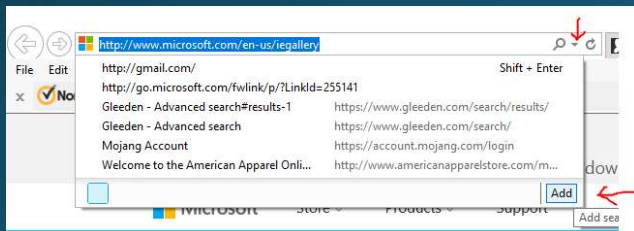


# Changing your Search Engine

Google: <https://support.google.com/websearch/answer/464?hl=en>

## Internet Explorer 11

1. Open Internet Explorer.
2. In the top right corner of the search box, click the down arrow.
3. Click **Add**.
4. Select **Google Search**.
5. Click **Add**.
6. In the top right, click Settings .
7. Select **Manage add-ons**.
8. Click **Search providers**.
9. Select **Google**.
10. Click **Make this my default search provider**.




# Clearing Cookies, Cache and History

<https://support.google.com/accounts/answer/32050?hl=en>

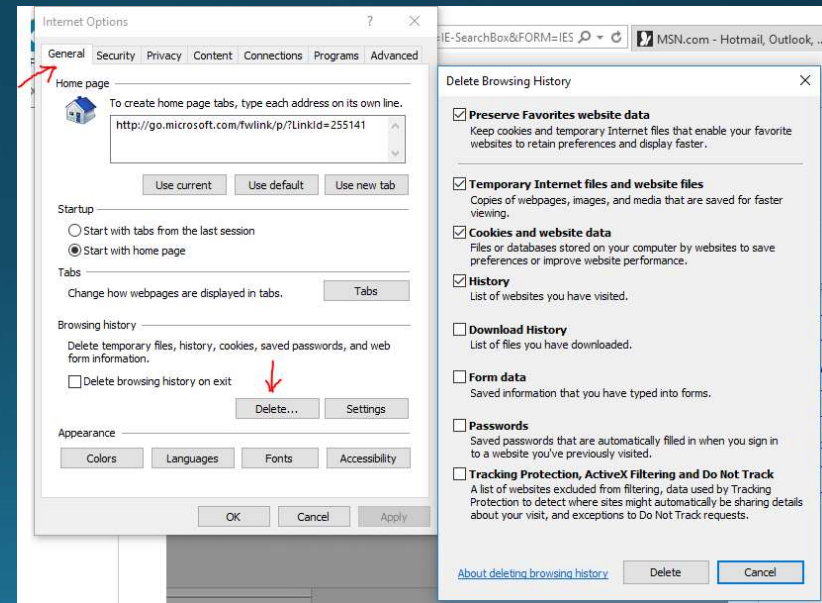
## Chrome

### Google Chrome

#### Computer

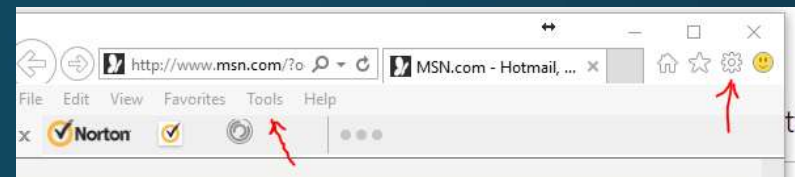
1. Open Chrome.
2. On your browser toolbar, click More .
3. Point to **More tools**, and then click **Clear browsing data**.
4. In the "Clear browsing data" box, click the checkboxes for **Cookies and other site and plug-in data** and **Cached images and files**.
5. Use the menu at the top to select the amount of data that you want to delete. Choose **beginning of time** to delete everything.
6. Click **Clear browsing data**.

## Internet Explorer

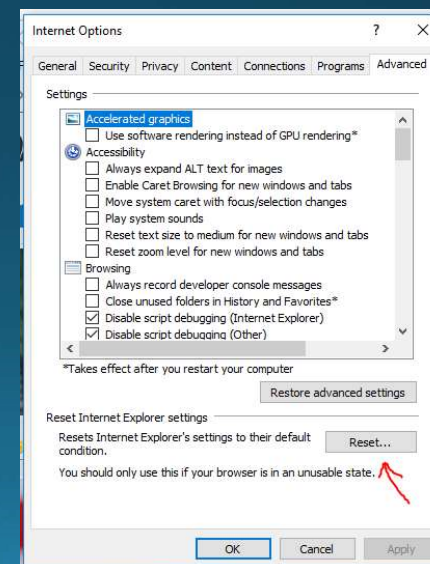


# Resetting Browser setting - IE

- On the **Tools** menu, tap or click **Internet options**.

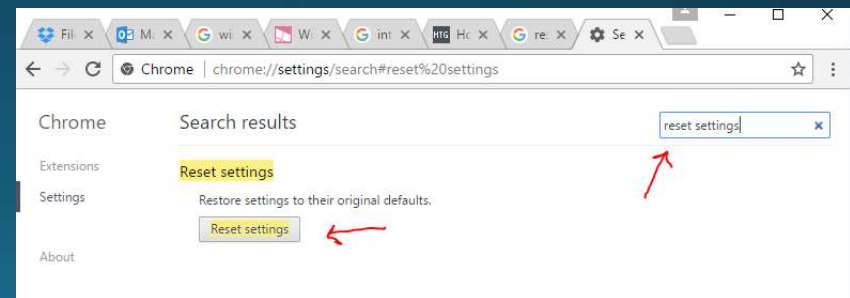
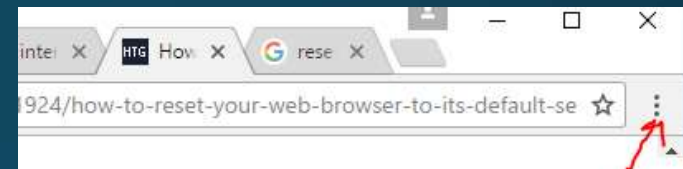


- In the **Internet Options** window, tap or click the **Advanced** tab.



# Resetting Browser setting - Chrome

- Click the menu button (three horizontal lines) in the upper-right corner of the browser window and select "Settings"
- Start typing "reset settings" in the search box. Settings matching the search term start displaying. Click the Perform a search for "reset browser" and you'll see the Reset browser settings button.





# LMS Tip – Split screen BEFORE

Home / Textbook / Vol. I - Direct Current (DC) / Ohm's Law / An Analogy for Ohm's Law

## An Analogy for Ohm's Law

Chapter 2 - Ohm's Law

Ohm's Law also makes intuitive sense if you apply it to the water-and-pipe analogy. If we have a water pump that exerts pressure (voltage) to push water around a "circuit" (current) through a restriction (resistance), we can model how the three variables interrelate. If the resistance to water flow stays the same and the pump pressure increases, the flow rate must also increase.

<b>Pressure</b> = increase	<b>Voltage</b> = increase
<b>Flow rate</b> = increase	<b>Current</b> = increase
<b>Resistance</b> = same	<b>Resistance</b> = same

$$\begin{matrix} \uparrow & \uparrow \\ E & = & I & R \end{matrix}$$

If the pressure stays the same and the resistance increases (making it more difficult for the water to flow), then the flow rate must decrease:

<b>Pressure</b> = same	<b>Voltage</b> = same
<b>Flow rate</b> = decrease	<b>Current</b> = decrease
<b>Resistance</b> = increase	<b>Resistance</b> = increase

Pages in Chapter 2

- Ohm's Law - How Voltage, Current, and Resistance Relate
- An Analogy for Ohm's Law**
- Power in Electric Circuits
- Calculating Electric Power
- Resistors
- Nonlinear Conduction
- Circuit Wiring
- Polarity of voltage drops
- Computer Simulation of Electric Circuits
- [PDF Version](#)
- Volume Index



# LMS Tip – Split screen Click&Drag

The image shows a split-screen view of a Learning Management System (LMS). The left window displays a textbook page titled "An Analogy for Ohm's Law" from "Chapter 2 - Ohm's Law". The page includes a water-and-pipe analogy and the equation  $E = I R$ . The right window shows the "JATC of Greater Boston BLENDED LEARNING ADMINISTRATIVE ACCESS" interface, specifically a "Preview Quiz for Lesson 7". The quiz question asks for the definition of a circuit, with "True" and "False" options. The interface includes navigation buttons like "Back", "Next", and "Start A New Preview".

**Textbook Page Content:**

Home / Textbook / Vol. I - Direct Current (DC) / Ohm's Law / An Analogy for Ohm's Law

### An Analogy for Ohm's Law

Chapter 2 - Ohm's Law

Ohm's Law also makes intuitive sense if you apply it to the water-and-pipe analogy. If we have a water pump that exerts pressure (voltage) to push water around a "circuit" (current) through a restriction (resistance), we can model how the three variables interrelate. If the resistance to water flow stays the same and the pump pressure increases, the flow rate must also increase.

<b>Pressure</b> = increase	<b>Voltage</b> = increase
<b>Flow rate</b> = increase	<b>Current</b> = increase
<b>Resistance</b> = same	<b>Resistance</b> = same

$$\begin{matrix} \uparrow & \uparrow \\ E = I R \end{matrix}$$

If the pressure stays the same and the resistance increases (making it more difficult for the water to flow), then the flow rate must decrease:

<b>Pressure</b> = same	<b>Voltage</b> = same
<b>Flow rate</b> = decrease	<b>Current</b> = decrease
<b>Resistance</b> = increase	<b>Resistance</b> = increase

**Quiz Preview Content:**

JATC of Greater Boston  
BLENDED LEARNING  
ADMINISTRATIVE ACCESS

You are logged in as Thomas Rasmussen (Log out)

Back Home DC Theory, Lvl I - 2nd Ed Lesson 7: The Electrical Circuit and Ohm's Law Quiz for Lesson 7 Preview

Close Full Screen

### Preview Quiz for Lesson 7

Start A New Preview

Question 1 (id:5945)  
Not yet answered  
Points out of 1.00  
Flag question

A circuit is defined as a completed path for voltage to flow from a source of voltage through a load and back to the source.

Select one:

True

False

Next



# LMS Tip – Split screen AFTER

The image shows a split-screen view of two web browsers. The left browser window displays a webpage titled "An Analogy for Ohm's Law" from "ALL ABOUT CIRCUITS". The page content includes a table of variables and the equation  $E = I R$ .

Pressure	=	increase	Voltage	=	increase
Flow rate	=	increase	Current	=	increase
Resistance	=	same	Resistance	=	same

$E = I R$

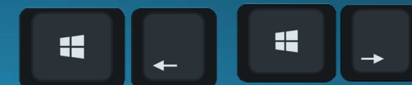
The right browser window displays the "JATC of Greater Boston BLENDED LEARNING ADMINISTRATIVE ACCESS" interface. It shows a "Preview Quiz for Lesson 7" with a question:

Question 1  
Not yet answered  
Points out of 1.00  
Flag question

A circuit is defined as a completed path for voltage to flow from a source of voltage through a load and back to the source.

Select one:  
 True  
 False

*NOTE: Use Windows + Arrow keys to position equally*



# Being Productive



# Why be in a rush to sit in traffic



# Take 30 min to do your homework



# Computer Labs

Room: 202

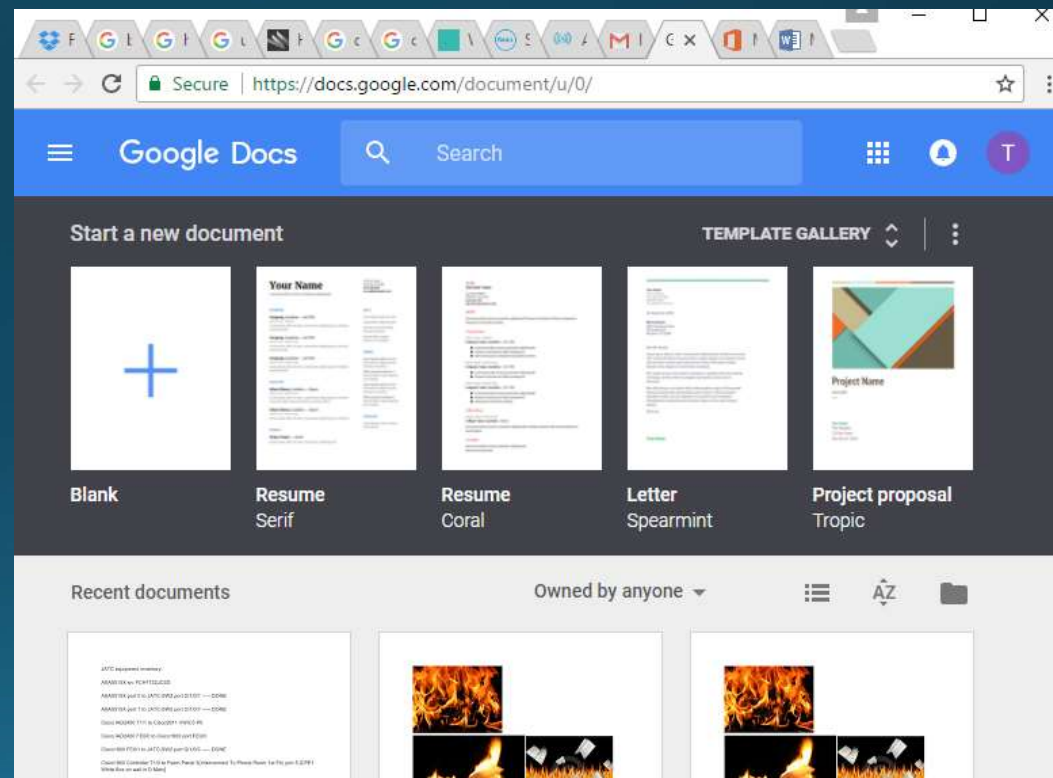


Room: 3A



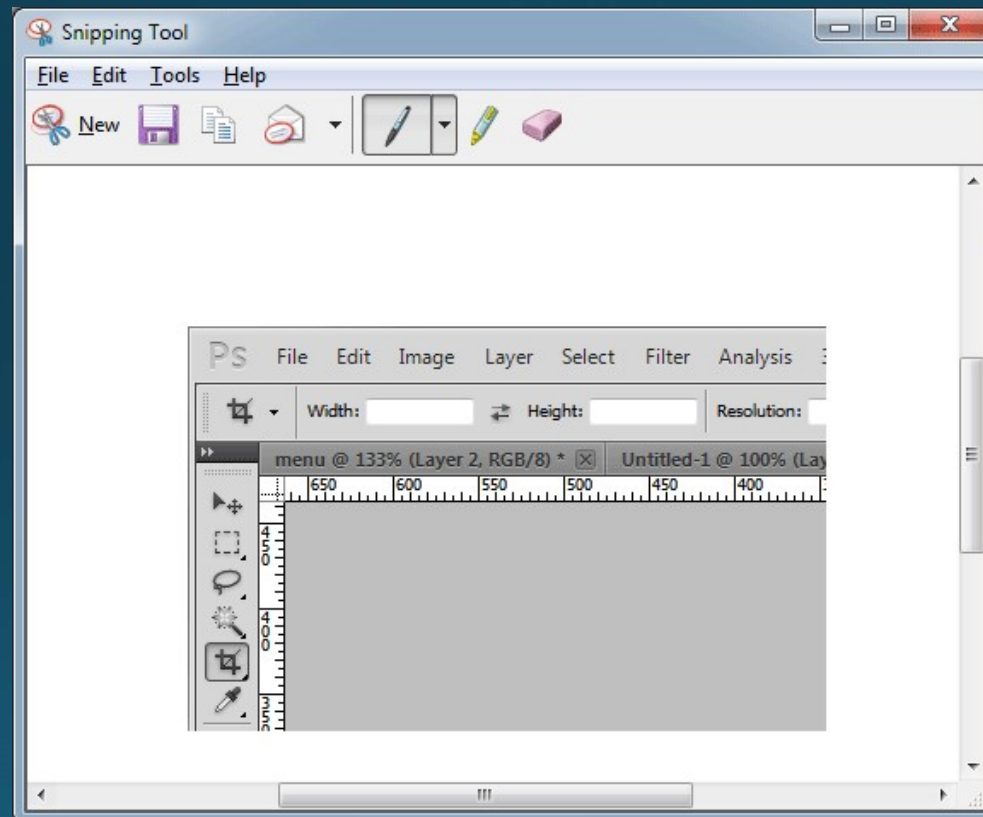
# Doing Homework - Google Docs

- Word Processor
- Spreadsheet
- Free
- Gmail account





# Snipping Tool



# Screenshot iPhone

## How to take a screenshot on your iPhone, iPad, and iPod touch

Learn how to capture the screen on your iOS device, and add drawings or text with Markup.

1. On an iPhone 8 or earlier, iPad, or iPod touch, press and hold the Top or Side button.
2. Immediately click the Home button, then release the Top or Side buttons.
3. In iOS 11, a thumbnail of your screenshot appears in the lower-left corner of your device. Tap the thumbnail to **add drawings and text with Markup**, or press and hold the thumbnail to share the screenshot. Swipe left on the thumbnail to dismiss it.

To find the screenshot you just took, along with ones you've taken before, go to Photos > Albums and tap Screenshots.



<https://support.apple.com/en-us/ht200289>



# Screenshot Android

- Press and hold the home button and the power button at the same time.



# 1<sup>st</sup> Stop for Questions

The screenshot shows a web browser window with the URL [bostonjatc.com](http://bostonjatc.com). The page features a dark blue sidebar on the left with the JATC logo and navigation links: HOME, APPRENTICE INFORMATION (+), HOMEWORK BLOG, ABOUT THE JATC (+), APPLY FOR APPRENTICESHIP (+), and CODE UPDATE COURSES. The main content area has a large banner image of a brick building with the text "IT'S YOUR FUTURE JOIN THE ELECTRIC TEAM". Below the banner, the heading "WHAT IS THE JATC OF GREATER BOSTON?" is followed by a paragraph: "The Greater Boston Joint Apprenticeship Training Center's (JATC) primary mission is to develop the most skilled, responsible and responsive Electricians and Technicians in the United States of America. We are dedicated to building professionals who have the expertise, character and sense of teamwork to bring value to the clients they serve, the union they represent and the contractors who employ them."

[www.bostonjatc.com](http://www.bostonjatc.com)





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HOME

APPRENTICE INFORMATION

2017-2018 VACATION/MAKE UP  
SCHEDULE

APPRENTICE ACTIVITIES

APPRENTICE STEP RAISES

CLASS SCHEDULES

ADDITIONAL HANDOUTS AND  
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# ADDITIONAL HANDOUTS AND INFORMATION

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*Apprentices attending week of June 25*

Please see the below attachments for Apprentice Boot Camp Schedule and Information for June 25, 2018 – June 29, 2018

[Boot Camp Schedule](#)

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### JATC of Greater Boston | 2017-2018 Vacation/Make-Up Calendar

Test/Quiz Make Ups will run from 8:00 AM to 10:00 AM

No School



Test / Quiz  
Makeup days



	<table border="1"> <thead> <tr> <th colspan="7">AUGUST 2017</th> </tr> <tr> <th>Su</th> <th>M</th> <th>T</th> <th>W</th> <th>Th</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> </tr> <tr> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> <td>19</td> </tr> <tr> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> </tr> <tr> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>31</td> <td></td> <td></td> </tr> </tbody> </table>	AUGUST 2017							Su	M	T	W	Th	F	S			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			<table border="1"> <thead> <tr> <th colspan="7">FEBRUARY 2018</th> </tr> <tr> <th>Su</th> <th>M</th> <th>T</th> <th>W</th> <th>Th</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> </tr> <tr> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> </tr> <tr> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> </tr> <tr> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	FEBRUARY 2018							Su	M	T	W	Th	F	S					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				<p>10 Test/Quiz Make Ups 19 Presidents' Day</p>														
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CONTRACTING INDUSTRY



HOME

APPRENTICE INFORMATION

2017-2018 VACATION/MAKE UP  
SCHEDULE

APPRENTICE ACTIVITIES

APPRENTICE STEP RAISES

CLASS SCHEDULES

ADDITIONAL HANDOUTS AND  
INFORMATION

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# 2017-2018 Schedules

[table "45" not found /]

## Second Year Electrical Schedule

All apprentices will report to school at 7:00 AM

Show  entries

Search:

Semester	Week Number	Date	Academics	Shop
2	12	Wednesday, June 20, 2018	A,B,C,E,F,G	D,H

Showing 1 to 1 of 1 entries

[table "70" not found /]







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FOR THE ELECTRICAL  
CONTRACTING INDUSTRY



HOME

APPRENTICE INFORMATION

2017-2018 VACATION/MAKE UP  
SCHEDULE

APPRENTICE ACTIVITIES

APPRENTICE STEP RAISES

CLASS SCHEDULES

ADDITIONAL HANDOUTS AND  
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HOME

APPRENTICE INFORMATION +

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CODE UPDATE COURSES

CONTINUING EDUCATION COURSES



# BLOG

## WEDNESDAY, JUNE 13, 2018

Wednesday, June 13, 2018 Second Year Electrical Group AAC Theory, Funk, R. Quiz #2, Homework: LMS #3 and 4 Transformers, Whalen, D. Quiz -6, Homework: N/AAC Theory, Adjemian, R. No Test/Quiz, Homework: Study Chapters 4, 5 and 6 for final exam Group B Circuitry, O'Connell, D. Module #4,... [Read more](#)

This entry was posted in [Uncategorized](#) on [June 14, 2018](#) by [Adrienne Itri](#)

Tuesday, June 12, 2018 Group A and B Signals, N/A Code/517, Naughton, D. Final Exam Fire Alarm, N/A Group C and D Grounding and Bonding, Whalen, D. Final Group E and F OSHA 30, Spellman, T. Final MC Shop, Donovan, M. Final

This entry was posted in [Uncategorized](#) on [June 13, 2018](#) by [Adrienne Itri](#)

## THURSDAY, MAY 7, 2018

# [www.bostonjatc.com](http://www.bostonjatc.com)

- Subject to Change !!!
- Surf before you call !!!!!
- Classes / Shops
- Homework – If you missed a class \*CHECK\*
- Work hours
- Makeup and Vacations
- Snow Days



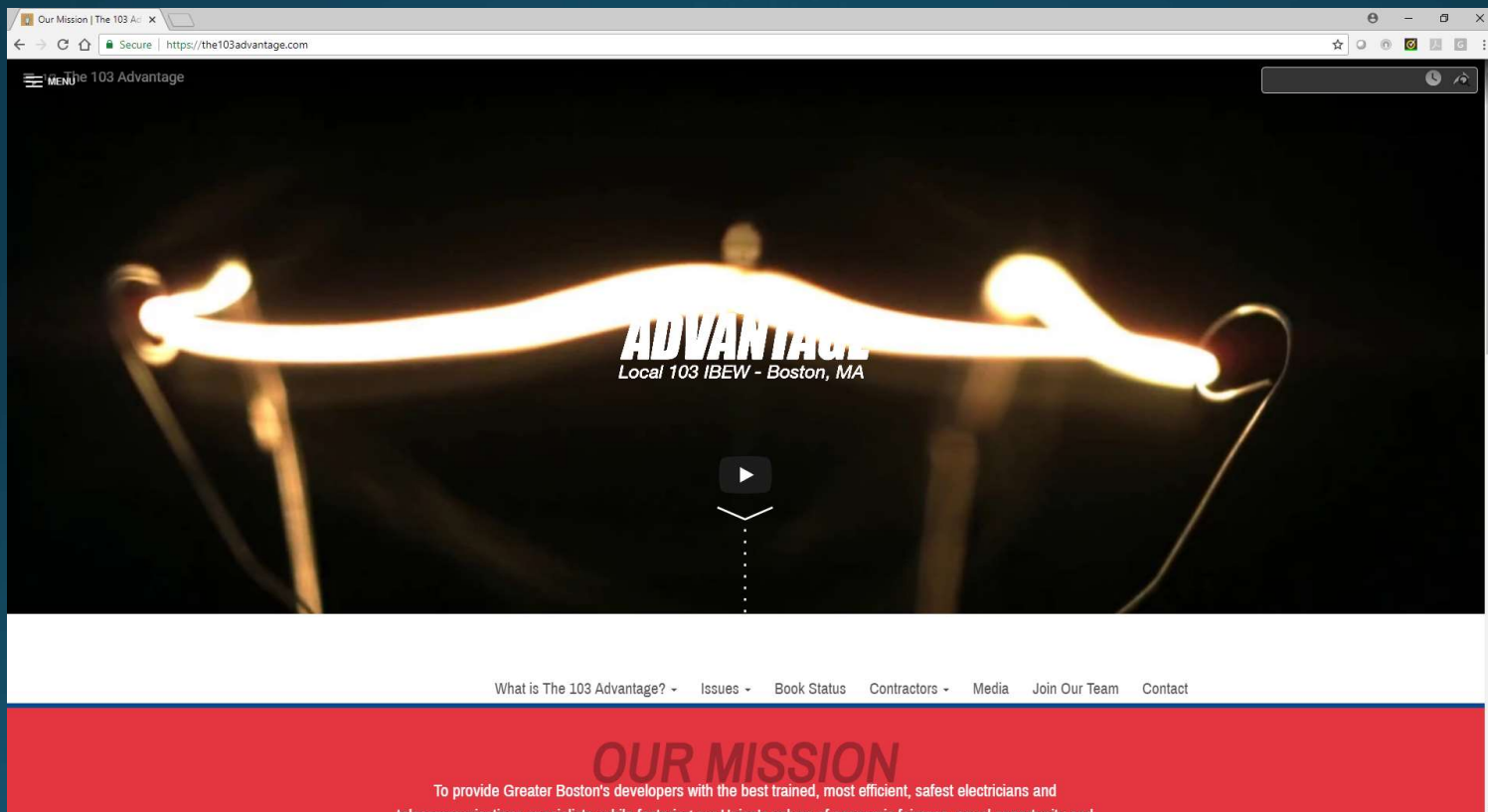
# JATC on Social Media



@bostonjatc103



# the103advantage.com



# IBEW.org

IBEW > Home

www.ibew.org

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Connecting North America

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International Brotherhood of Electrical Workers  
900 Seventh Street, N.W.  
Washington, DC 20001  
Telephone: (202) 633-7000  
Email: IBEW

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IBEW'S 2018 PHOTO CONTEST  
ENTER TODAY | DEADLINE: OCT 1

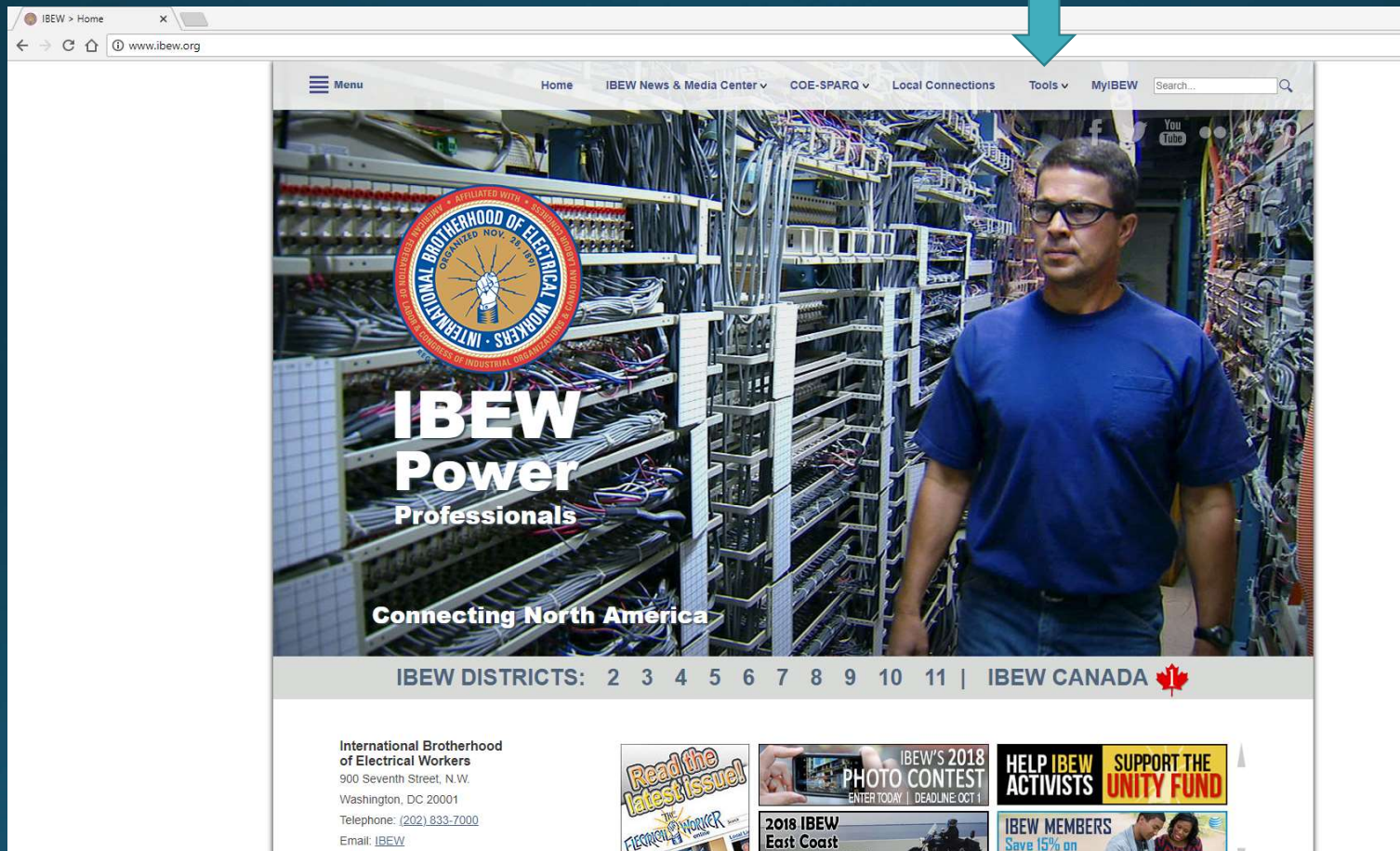
2018 IBEW East Coast

HELP IBEW ACTIVISTS SUPPORT THE UNITY FUND

IBEW MEMBERS Save 15% on

GREATER BOSTON JATC

# IBEW.org/tools



The screenshot shows the IBEW.org website interface. At the top, there is a navigation menu with the following items: Home, IBEW News & Media Center, COE-SPARQ, Local Connections, Tools, and MyIBEW. A teal arrow points to the 'Tools' menu item. Below the navigation menu is a large banner image of an electrical worker in a blue shirt standing in a server room. The banner features the IBEW logo and the text 'IBEW Power Professionals' and 'Connecting North America'. Below the banner is a navigation bar for IBEW DISTRICTS: 2 3 4 5 6 7 8 9 10 11 | IBEW CANADA. At the bottom of the page, there is a footer with contact information for the International Brotherhood of Electrical Workers and several promotional banners for 'Read the latest issue!', 'IBEW'S 2018 PHOTO CONTEST', 'HELP IBEW ACTIVISTS SUPPORT THE UNITY FUND', '2018 IBEW East Coast', and 'IBEW MEMBERS Save 15% on'.

IBEW DISTRICTS: 2 3 4 5 6 7 8 9 10 11 | IBEW CANADA

International Brotherhood of Electrical Workers  
900 Seventh Street, N.W.  
Washington, DC 20001  
Telephone: (202) 633-7000  
Email: IBEW

Read the latest issue!  
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# IBEW.org - 103 map

## ➤ Tools

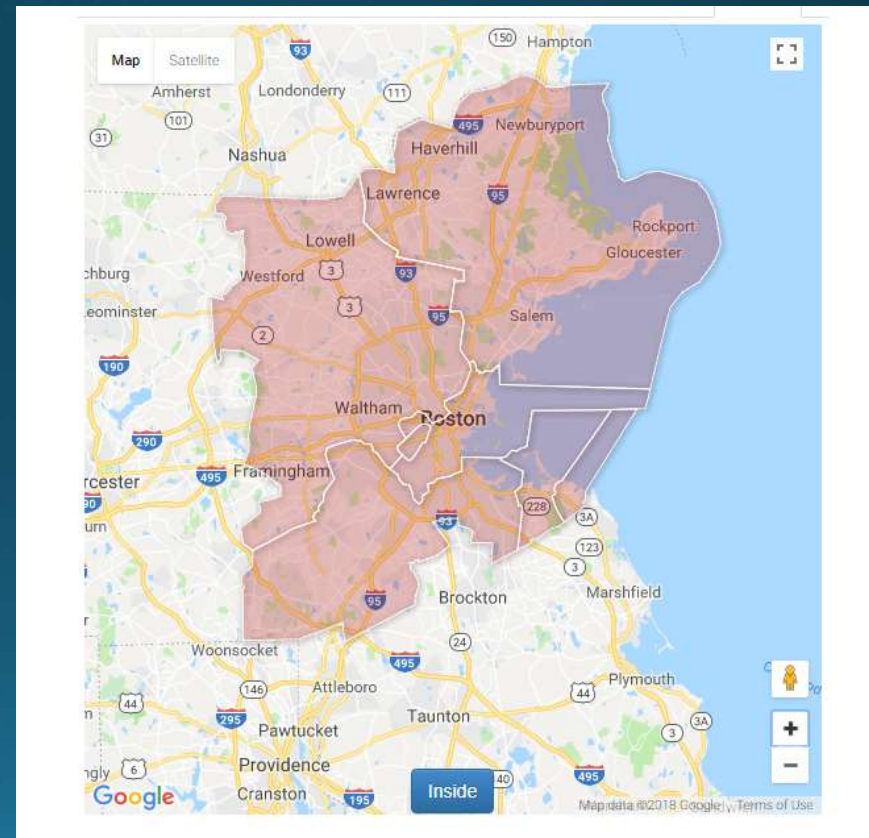
### ➤ Local Union Directory

#### ➤ Search by Local

#### ➤ Type 103

#### ➤ Select and Click Go

#### ➤ Maps





# Franklin to Amesbury @ 2:06 PM

The screenshot shows a Google Maps interface with the following details:

- Origin:** Franklin, Massachusetts 02038
- Destination:** Amesbury, Massachusetts
- Route Options:**
  - via I-495 N:** 1 h 18 min, 78.0 miles (Fastest route, the usual traffic)
  - via I-95 N:** 1 h 28 min, 85.4 miles
  - via I-495 S and I-95 N:** 1 h 30 min, 88.7 miles

The map displays a blue route starting from Franklin, MA, heading north on I-495, then east on I-95, and finally north on I-495 to Amesbury, MA. Other cities shown include Boston, Worcester, Lowell, and Manchester.



Who  
wants to  
pay \$40  
per day to  
park?



What is the #1  
way to save  
on parking  
with out using  
an App?

Car Pool

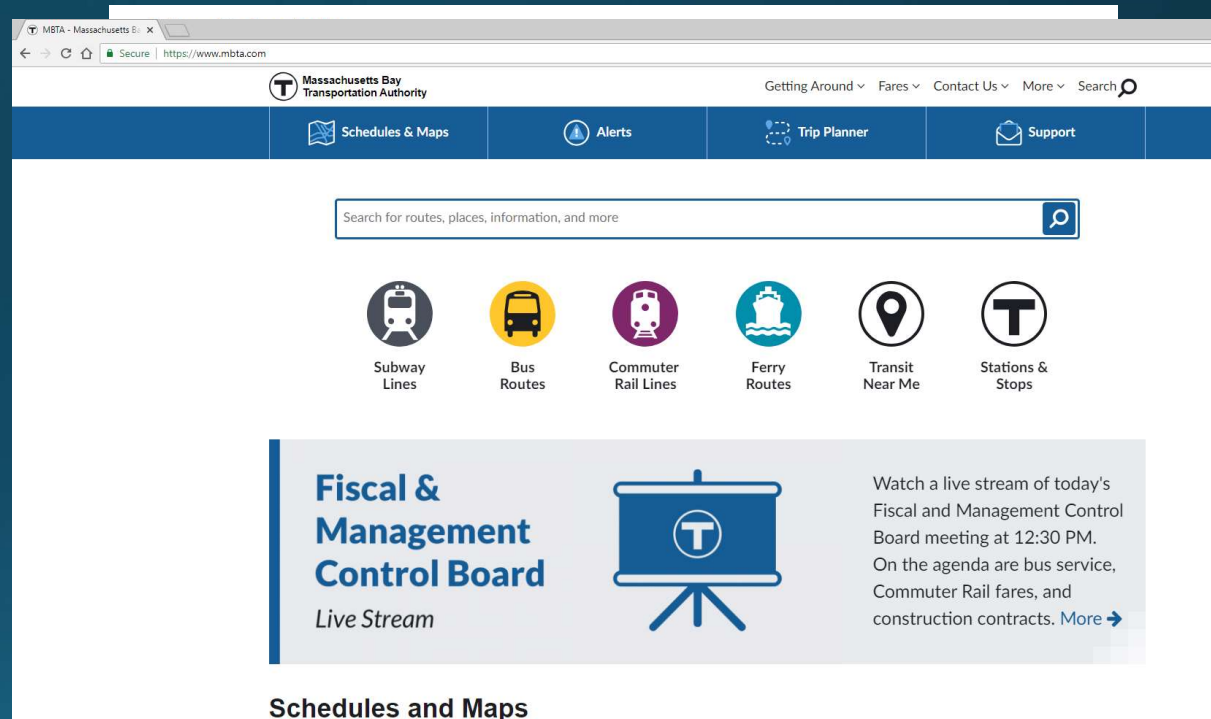


What is one  
way to save  
\$\$ without  
looking for a  
parking space



# www.mbta.com


- Schedules and Maps
- Alerts
- Subway
- Bus
- Commuter Rail





# MBTA – Endorsed Apps

**Trip Planning**

**Transit App**




The MBTA-endorsed Transit App is the best way to plan your trips around Boston. Use the app to find the nearest bus stop, train station, or ferry dock; see when the next bus or train is arriving; and find out how long your commute will be.





**Commuter Rail**


**MBTA mTicket**





With the mTicket app, your smartphone is your ticket! Buy and redeem Commuter Rail tickets and passes; view schedules and service alerts, and quickly contact Customer Support.



**Keolis**




View schedules and service alerts for all Commuter Rail lines, and quickly contact Customer Support.





**Parking**

**PayByPhone**



Use PayByPhone to pay daily parking fees and buy monthly parking passes.



<https://www.mbta.com/mbta-endorsed-apps>



# Other Apps

- Traffic
  - **WAZE** - <https://www.waze.com>
  - Google Maps
- Parking
  - **Spothero** - <https://spothero.com/boston-parking>
  - **Parking Panda** - <https://www.parkingpanda.com/boston-parking>
  - <https://boston.bestparking.com/>
  - <https://www.parkme.com/boston-parking>
  - <https://www.parkwhiz.com>
- Ride share
  - **Uber**
  - **Lyft**
- Taxi
  - **Curb** - <https://mobileapp.gocurb.com/boston-2/>
- Bikes
  - **BLUEbikes** - <https://www.bluebikes.com/>





Have a Safe Day