

COMPUTER & LIBRARY TRAINING

Computers for Beginners 4: Use Google Search and Maps



Learning Outcomes

In this class you will:

- Build on tools and experience from **Computers for Beginners 3: Use the Internet** or your basic web skills
- Explore advanced search strategies by using *filters* and *tools* in search engines and by using Google Maps
- Discuss how to assess your search results even before you click on a web link
- Experiment with interactive and multimedia sites
- Apply new skills by using the mouse to scroll, drag and zoom in Google Maps
- Test new skills learned by working on challenges
- Review additional resources to help you learn more

Review Quiz

1. What part of the web site address <https://www.cbc.ca> would you need to put in the address bar to go to the CBC web site?
 - a. The whole thing.
 - b. www.cbc.ca
 - c. cbc.ca
2. Which of the following addresses will take you to a Canadian web site?
 - a. www.amazon.com
 - b. www.amazon.uk
 - c. www.amazon.ca
3. Google is:
 - a. The world's only search engine.
 - b. One of many different search engines.
 - c. One of the three different browsers available on TPL computers.

Answers:

1c. You only need to enter the **domain name** (cbc.ca) in the address bar. The computer fills in the rest automatically.

2c. www.amazon.ca is the address of the Canadian branch of Amazon. The clue is at the end of the domain name, **.ca**.

3b. Google is the search engine we used today, but it's not the only search engine available. Bing and Yahoo! Search are two other popular search engines.

What is the Internet?

In our previous class, Computers for Beginners 3: Use the Internet, you learned about the **Internet** and the **World Wide Web (or the Web)**, how to understand a web address and common features of a website. You also learned how to visit a website if you know the address, use common features to explore a site (such as Links, Menus, and Search Boxes), and how to find a website using a search engine if you do not know the address.

In this class you will learn more about how the internet and web work, continue to practice your web searching, website navigation, and mouse skills, by looking at your results in detail, applying filters to refine your results, and exploring multimedia sites.

Let's start with a short video:

<https://tinyurl.com/whatistheinternet2> (3:44 min)

I hope this video **starts** to help you build a picture in your mind of what the internet is and how it works. The more you practice and use the internet and the web, the more comfortable you will become.

Quiz: How much of the internet is indexed by Google?

Less than 1%

10-20%

50%

75%

All of it

Quiz Answer: The answer is Less than 1%!

This is a bit of a trick question because the internet is much more than the world wide web. So, why is this statistic true and how big is the internet?

How big is the Internet?

It's difficult to be accurate about the size of the internet as the numbers of computers connected to the internet changes all the time, and websites are created around the world everyday. As of May 2019, one site estimated that Google indexes approx. 5.7 billion pages. *From* <https://www.worldwidewebsite.com/>

However, there is a huge amount of the internet which is not indexed at all. This includes all the data behind firewalls (or network security systems). Such as user databases, business intranets (or internal networks), password-protected websites, etc. Examples include email or websites like Netflix where you need to login or fill in a form to gain access.

Lots of content is indexed by search engines. Google is the most popular of all the web search engines. But how does it work?

There is no central directory to the internet so Google runs a program called a "web crawler" or "spider" which methodically visits web pages, makes a copy and then indexes them according to a specific set of rules. When you search on Google.com, Google takes your search words and serves up the most relevant results based on many different factors: the meaning or intent of your query, relevance of webpages, quality of content, usability of webpages, context and settings. *From* <https://www.google.com/search/howsearchworks/>

Review from last class:

Q: what is the difference between a browser and a search engine?

Web browsers are software which reads information on the web and displays it on your computer. Examples are Chrome, Internet Explorer and Firefox.

Search Engines are websites which index other web sites and help you find information contained on them. Examples are Google, Bing and DuckDuckGo.

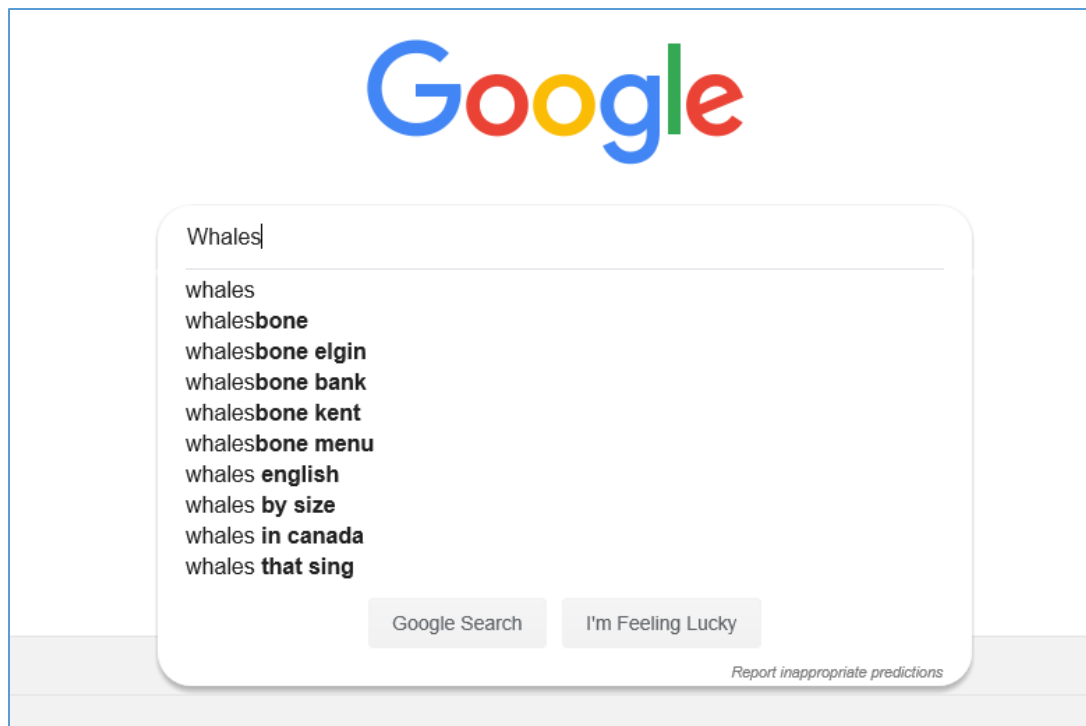
Google Advanced Searching

Let's get some more practice with a Google search.

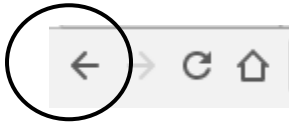
Exercise 1: Google Search Tools



1. Open the **Chrome** web browser
2. Click in the address bar and type **google.com**
3. **Type in a search of your choice** or follow along with the me
4. My search word is **Whales**.
5. As you type, **pay attention to the screen**. You will see words and search terms will start to auto-fill below your typing.



1. When you are happy with your search words, press **Enter** on your keyboard
2. Let's have a look at the results to understand what Google served us, **scroll** down and have a look and **compare and discuss with your neighbour.**
3. **Take a few minutes**, look at your results in detail. **Before you click, what can you tell about the results just from the web address?**
4. **Click on links** to see more.
5. Use the **back button** to return to your search results.



In my case I have:

- **videos** of whales from **YouTube** at the top
- an encyclopedia style article on the right from **Wikipedia**
- **information** about whales from the **World Wildlife Foundation**
- then **news** stories and **articles** about whales

The screenshot shows a Google search for "Whales". The search bar at the top contains the word "Whales" and a magnifying glass icon. Below the search bar, there are tabs for "All", "Images", "Videos", "News", "Maps", and "More". The "Videos" tab is selected, showing three video thumbnails with play buttons and durations: "Two Beautiful Humpback Whales Dance | Animal Attraction | BBC Earth" (4:14), "Whales and Orcas Feeding Together | BBC Earth" (2:26), and "Killer Whale Attack (Documentary)" (4:00). Below the videos, there is a Wikipedia entry for "Whale" with a link to the full article. On the right side, there is a detailed information panel for "Whales" with a grid of images and a "More images" link. The information panel includes the following details:

- Whales** (Animal)
- Whales are a widely distributed and diverse group of fully aquatic placental marine mammals. They are an informal grouping within the infraorder Cetacea, usually excluding dolphins and porpoises. Whales, dolphins and porpoises belong to the order Cetartiodactyla, which consists of even-toed ungulates. [Wikipedia](#)
- Order:** Artiodactyla
- Class:** Mammalia
- Lifespan:** [Killer whale](#): 29 years, [Sperm whale](#): 60 – 70 years, [MORE](#)
- Mass:** [Killer whale](#): 3,600 – 5,400 kg, [MORE](#) [Encyclopedia of Life](#)
- Gestation period:** [Killer whale](#): 15 – 18 months, [MORE](#) [Encyclopedia of Life](#)

Exercise 2: Challenge – Try your own search!

Practice by repeating the exercise above with your **own choice of search**. Here are a few ideas if you need one:

bonjour
pi
uk pound
quartz
hurricanes
Toronto
Ottawa
arctic
Ireland
India
Paris
Pompeii
dolphins
flamingos
Einstein
Earhart
flu shot
Nobel prize
atomic clock
wool

Take a Stretch Break!

It's important to take breaks when using a computer for any length of time.

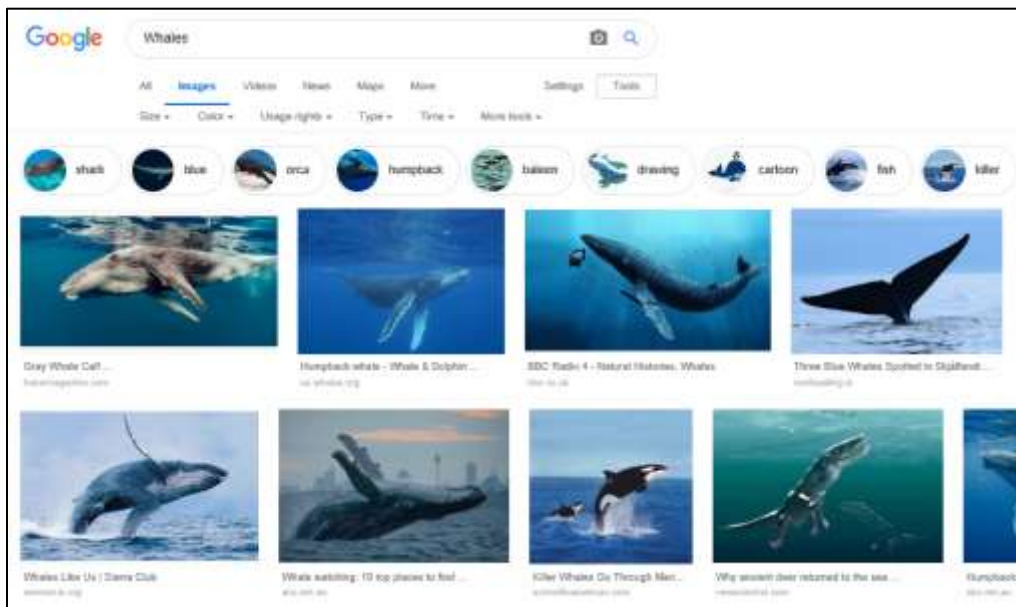
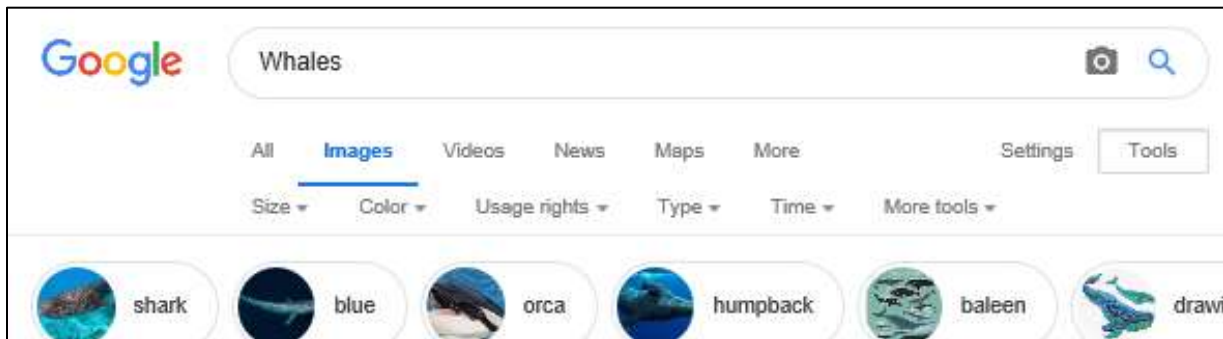
Take a minute now - shake out your hands and arms, and stand up if you are able.

Exercise 3: Filter for Images

Our previous searches included a variety of results from webpages to images to news articles to maps, and more, depending on our search terms.

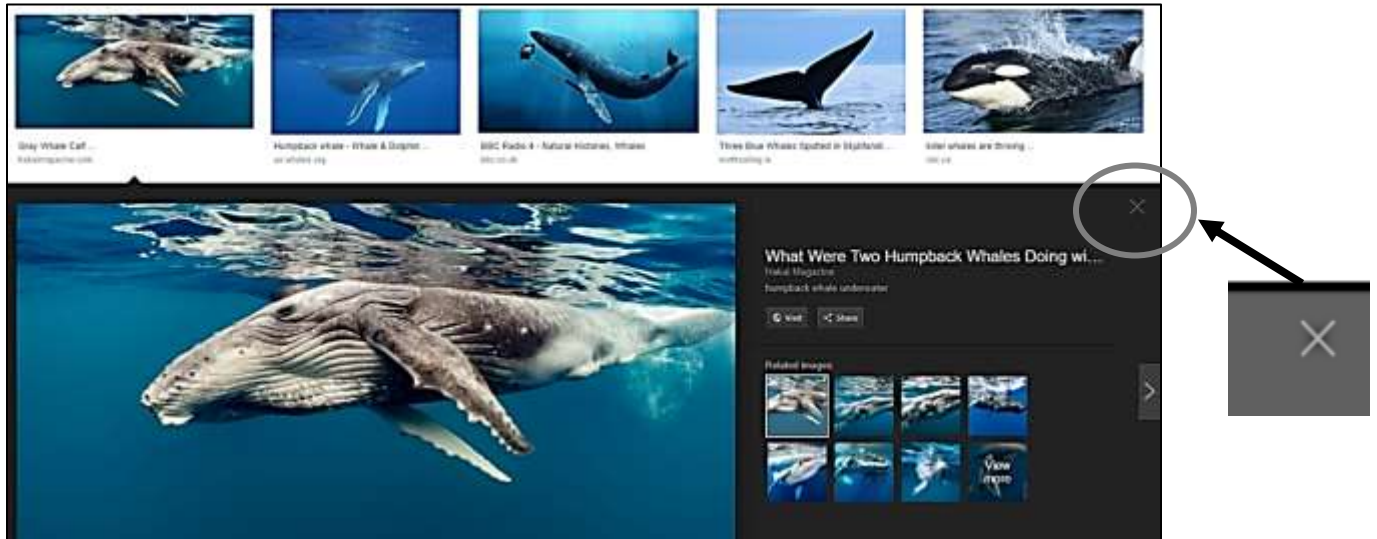
You may also have noticed under the search box there are a few headings: **All, Images, Videos, News, Maps, More**. These are **Filters**. We can use the Filters to refine our search. Let's explore these features in detail together.

1. **Using Your Search from the Challenge**, click on the **back button** until you are back to your **First Search screen**
2. Under your search box you will see categories for your results:
3. All, Images, Video, News, Maps, More.
4. Click on **Images**



5. Have a look at **your results** and notice:

- A page of “thumbnails” (small versions of the pictures)
- Name of the picture
- Website name
- Hover over the picture (but don’t click) to see the size of the picture

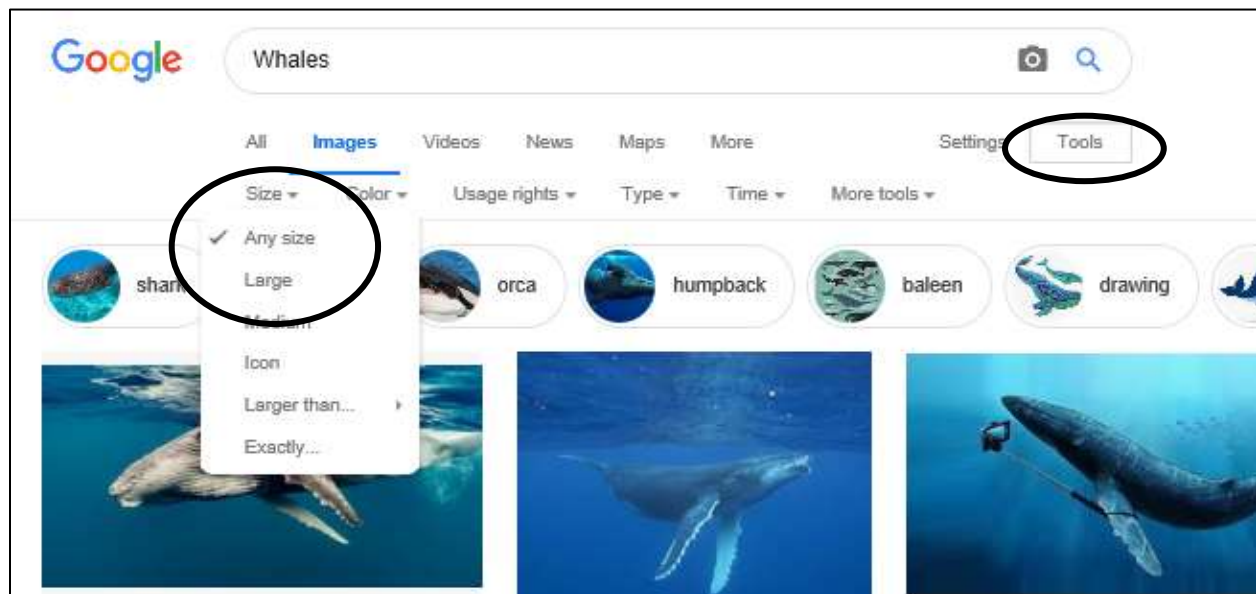


6. **Click once on a picture** (or thumbnail) to see a larger **Preview version** of the image
7. **Close** the preview by **clicking on the thumbnail again** or by **clicking on the X** in the top right corner of the preview
8. **Click** on another **thumbnail** to open the larger Preview version, then **click on the larger Preview to visit the website** where the picture lives
9. Notice this website opened in a **new Tab**.
10. Your Google search is still there in the Tab to the left, your image web page is in the Tab to the right.
11. **Click back and forth on each tab several times to switch between them**



Exercise 4: Use Tools to Find Large Images

1. Go to your Google Image Search results and Scroll back to the top of the page
2. Click on **Tools** to see more ways to filter your results:
3. **Size, Colour, Usage Rights, Type, Time, More Tools**
4. Click on **Size** to see the options. Now you can find large images to print out or save.
5. Click on **Large** and examine your results.
6. Try out other tools such as Color

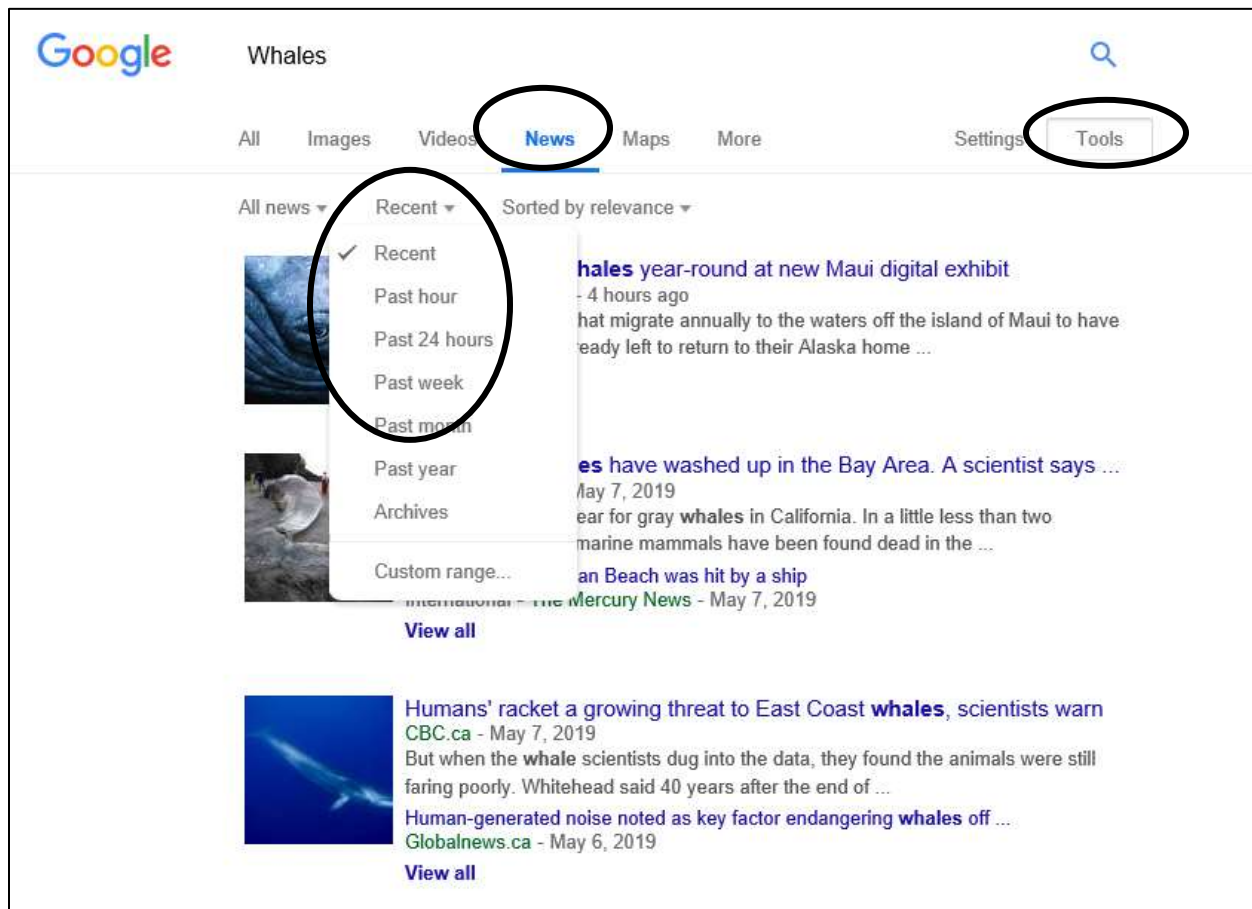


TIP: the size of image you choose will depend on how you want to use it. Small images are good for social media; large images are better for printing.

TIP: Always be respectful of **copyright**. You can filter by **Usage Rights** too!

Exercise 5: Filter for News

1. Go back to the top of your results page and **click on News**
2. Have a look at your **results**:
 - How old they are?
 - Who published them?
3. **Compare with your neighbour's results**
4. Click on **Tools** and click on **Recent**
5. Notice you can **refine your search even further** by timeframe: Recent, past hour, past week, and so on...



The screenshot shows a Google search for "Whales". The search bar contains "Whales" and a magnifying glass icon. Below the search bar, the navigation tabs are "All", "Images", "Videos", "News", "Maps", and "More". The "News" tab is selected and circled in black. To the right of the navigation tabs, there are "Settings" and "Tools" buttons, with the "Tools" button also circled in black. Below the navigation tabs, there are filters for "All news", "Recent", and "Sorted by relevance". The "Recent" filter is selected and circled in black. Below the filters, there are three news results. The first result is titled "Whales year-round at new Maui digital exhibit" and is dated "4 hours ago". The second result is titled "Whales have washed up in the Bay Area. A scientist says ..." and is dated "May 7, 2019". The third result is titled "Humans' racket a growing threat to East Coast whales, scientists warn" and is dated "May 7, 2019". Each result has a small image and a "View all" link below it.

Explore the World with Google Maps

Exercise 6: Google Maps – Address Search

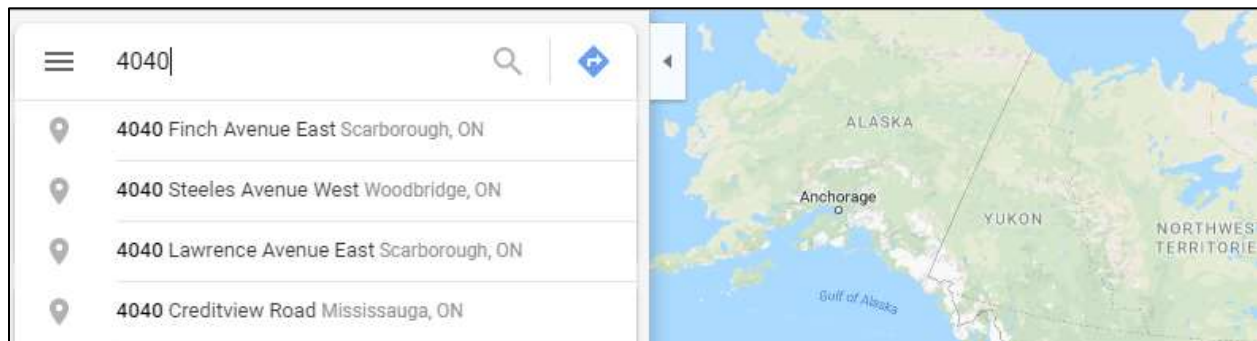
Let's have a look at an interactive site which is very useful for locating addresses and travel directions. This will give you **more mouse practice** and a chance to see another type of **filter** in action.

1. In your browser's address bar **type google maps** to perform a search for google maps. Click on the first result for: **www.google.ca/maps**
2. You will see a local or Canadian map. **Why do you think that is?**

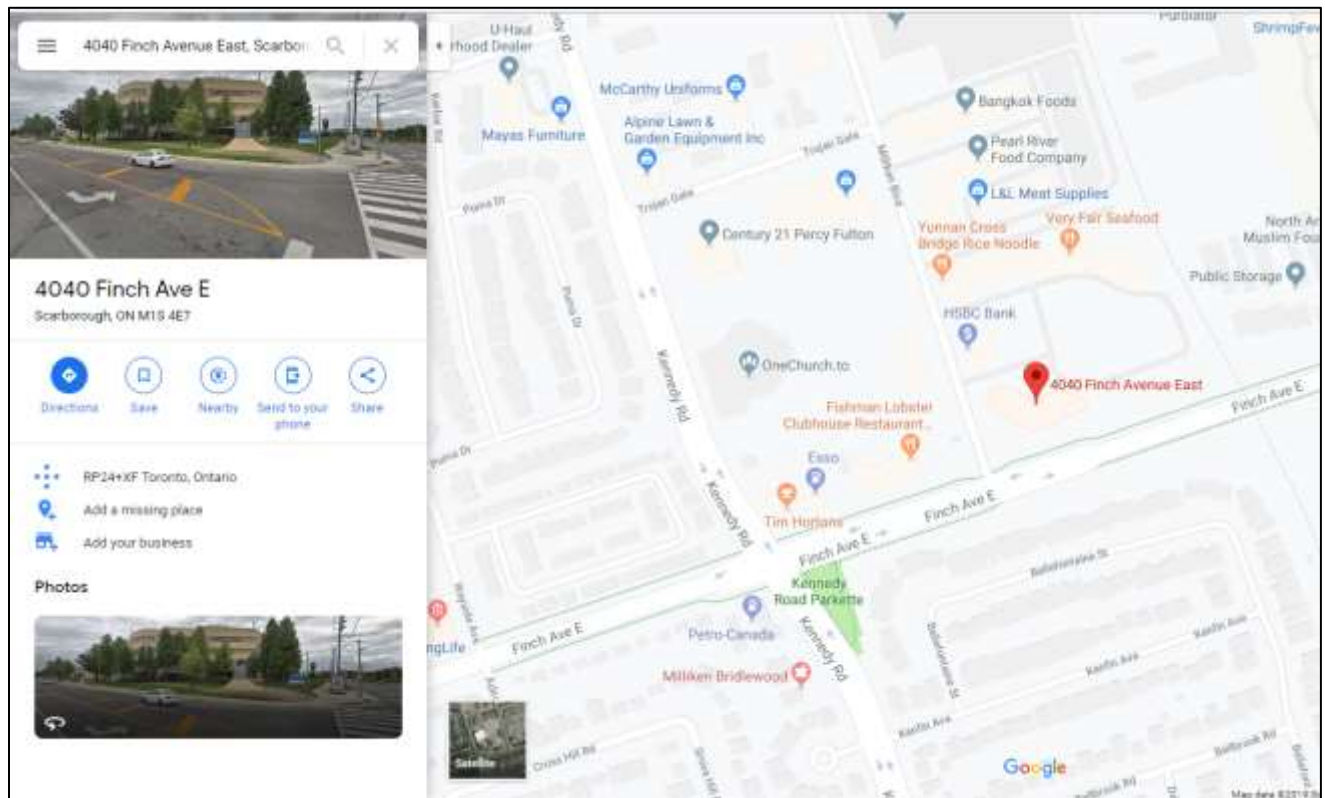
Google Maps pulls your current location from the IP or web address of the library computer. You can block this type of location information at home but for this exercise it's useful if we've started in Toronto.

3. Search using **any address**.
Try your home address, this library, anywhere in the world!

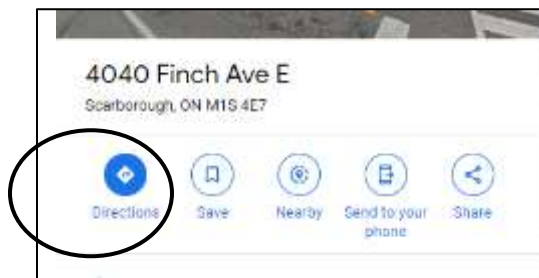
This is my example: **4040 Finch Ave East**. As always, **check the drop-down menu as you type** for suggested text.



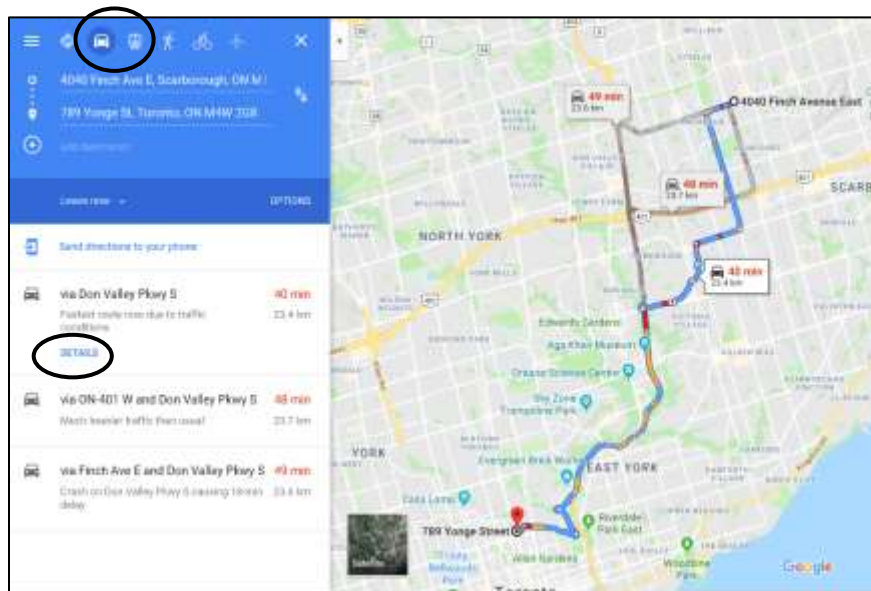
1. Stop and look at the results carefully. **What do you see?**
2. On the right side of the screen
 - a local map for your address and the surrounding area
 - a **red icon (or placemaker)** indicates your search address
 - **local businesses** with links
 - a **picture** of the business if you hover over the link
 - **street** names and **traffic** direction
 - zoom tools and map scale in the lower right corner
 - a link to a satellite image
3. On the left side of the screen you can see:
 - **photos** of the location
 - an option to get **directions** and more



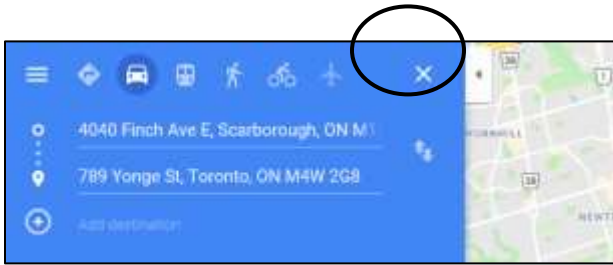
Exercise 7: Getting Directions



1. In the left panel, **click on Directions**
2. Type in an address of your choice (such as your home address) or follow along: **789 Yonge Street**
3. **Let's look at the results** again, you will see:
 - Several recommended **routes with distance and travel time estimates** (by car, transit, walking, biking, etc.,) **These are also filters!**
 - Detailed descriptions for the **routes**
 - **Slow travel** stretches on the roads may be marked in yellow or red
 - **Options for travel** by car, transit, biking, walking, etc.,
 - The opportunity to **change the time/date of travel**
 - And more...
4. **Take a few minutes to explore and click**



5. Click on the X next to your directions addresses to close this window and return to your main map.



WRAP UP: Be curious and fearless!

It takes time to learn a new skill. Computer applications are no different. But with time and practice it gets easier. It's also fun to learn something new!

At first you might be concerned about making a "mistake" but try not to be. You can't really "break" anything! You can always make a copy (or a backup) of a file before editing or changing it.

And while there is a learning curve it's good to know that there are many common functions across different programs. It may surprise you to know that most functions are found in the same menus in different software.

Understanding the similarities across different programs can really help you use and learn a new one.

Remember to practice! Take the class again if you want to. Or, if you want a new challenge, take one of the other classes here at the Library.

Today we learned:

- more about the internet and how big it is and the difference between the internet and the web
- how to filter your search and then use tools to refine that search even further
- that if we slow down and read our search results carefully we can understand more about the type of information available online

Where to Learn More

Books

Internet for Dummies (2015) by John R. Levine
My Internet for Seniors (2016) by Michael Miller

Online Courses

Internet Basics from GCF Global

<https://edu.gcfglobal.org/en/topics/internet/>

Internet Basics from Digital Learn:

<https://training.digitallearn.org/courses/internet-basics>

Videos

What is the Internet

- <https://tinyurl.com/whatistheinternet1> (2.40 min)
- <https://tinyurl.com/whatistheinternet2> (3:44 min)
- <https://tinyurl.com/whatistheinternet3> (4.30 min)

Articles and more

44 Google Map Tricks You Need to Try (for either mobile or desktop)

<https://www.pcmag.com/feature/328592/44-google-maps-tricks-you-need-to-try>

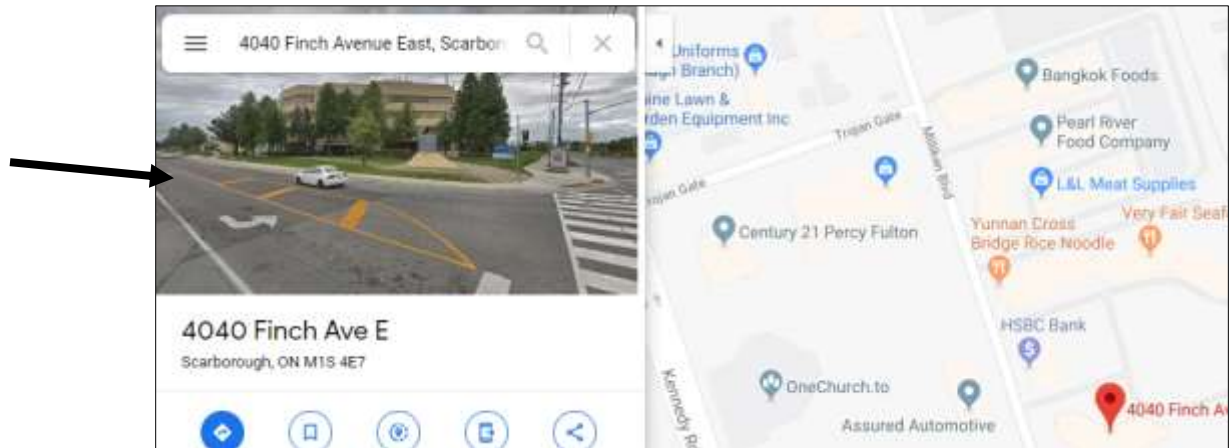
Google Maps Treks: <https://www.google.com/maps/about/treks/#/grid>

23 Google Search Tips You'll Want to Learn

<https://www.pcmag.com/feature/326078/23-google-search-tips-you-ll-want-to-learn/3>

Practice Exercises

Google Maps: Street View



1. Using a search of your choice or our example 4040 Finch Ave East address, **click on the photo** on the left panel under the address search box
2. This will open a “Street View” of your location. **Click +Hold +Drag your mouse** to spin and tilt your perspective on the picture
3. **Notice:** above the zoom tools there is a **compass** (lower right corner) to keep you oriented
4. **Notice:** in the lower left corner is a little box which allows you to return to Map View and there is **a little person representing “where you are”** in the picture.
5. Notice: if you hover your mouse pointer over the road you will see a **grey arrow, click to travel along the street.**
6. **Practice with your mouse** – it takes a while to get used to but it can be fun to do some virtual exploring this way.

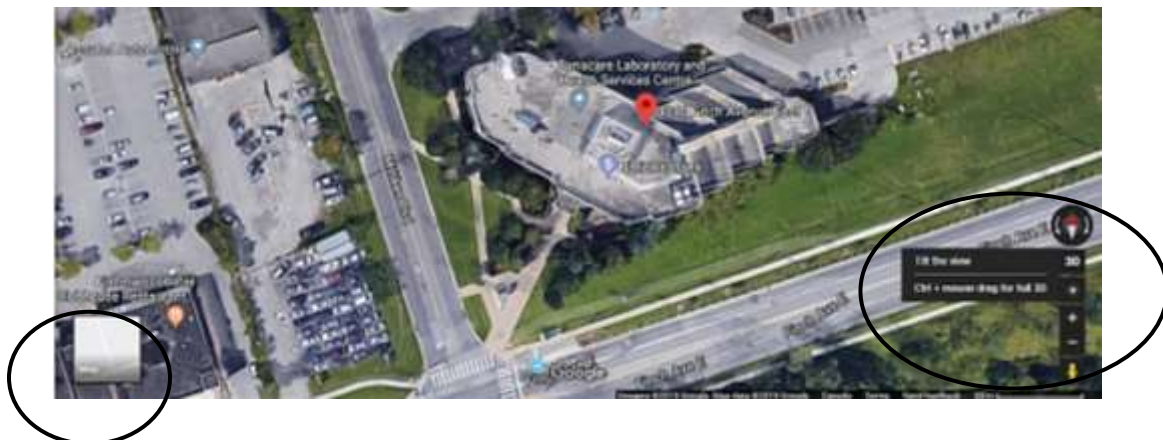


Google Maps: Satellite View and 3D

1. Using Chrome and Google Maps, type in an address.
I used **4040 Finch Ave East**
2. **Click on Satellite View** (lower left side of map)
3. **Zoom in and out by using the scroll wheel on your mouse OR**
4. use **the + and - zoom buttons** on the lower right corner of the map.
5. Notice the level of detail!



6. Above the + and - zoom buttons, you can **click on 3D** to see a 3D version of the map
7. **Click, hold and drag your mouse** to move the image
8. Hold down the **Ctrl (Control) key** on your keyboard and **click, hold and drag your mouse** to move the image (tilt and spin) in 3D space!
9. To **return to the map**, **click on 2D** on the Zoom toolbar, then click on the **Map view** box in the lower left corner of the map



Search Engine Comparison in Tabs

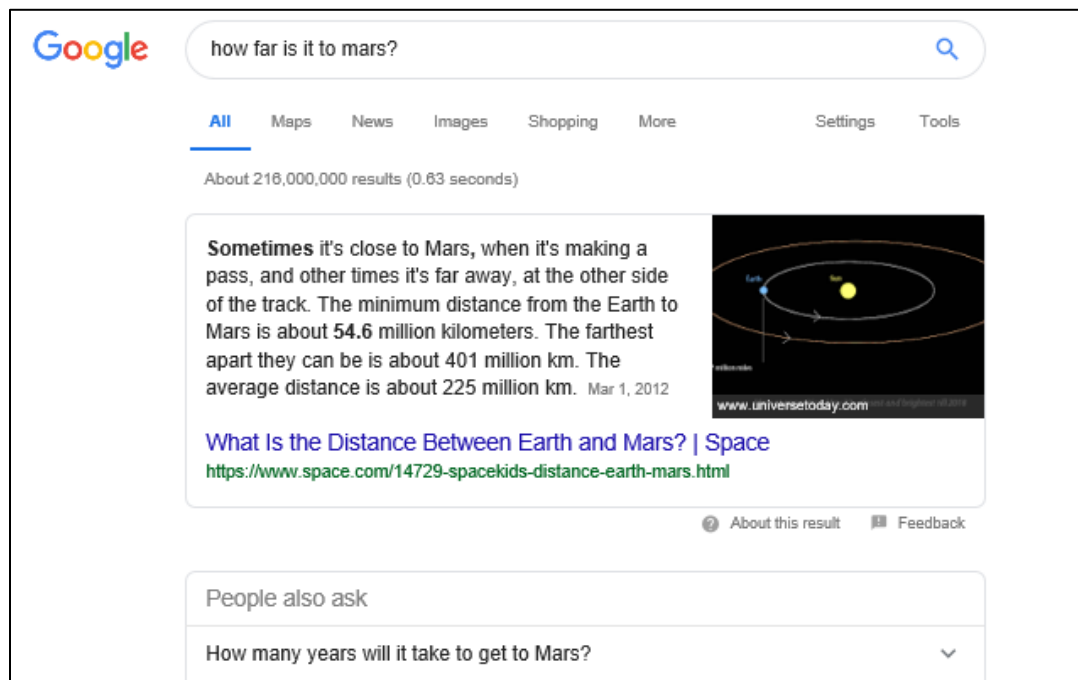
We focussed on **Google** as a search engine because it is the one used most often: approximately 73% of all searches, in 2018. What about the rest of the searches?

Bing (from Microsoft) powers approx. 8% of searches, **Yahoo** with 4%. Other search engines in the top ten include **DuckDuckGo**, Ask.com, Baidu (China), WolphramAlpha, Internet Archive, Yandex (Russia). From <https://netmarketshare.com>

Try comparing three search engine results: **Google vs Bing vs DuckDuckGo**.

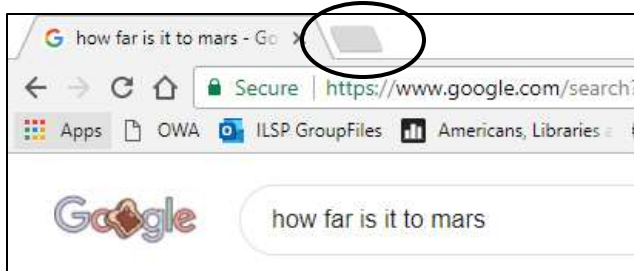
Google

1. Open the **Chrome** web browser
2. **Type in Google.com** in the address bar
3. In the Google search box **type in How far is it to Mars?** Press **Enter** on your keyboard.
4. **Notice we used a sentence in natural language for this search!**
5. Have a quick **look at your results**: we have articles from space.com, NASA, plus videos and more

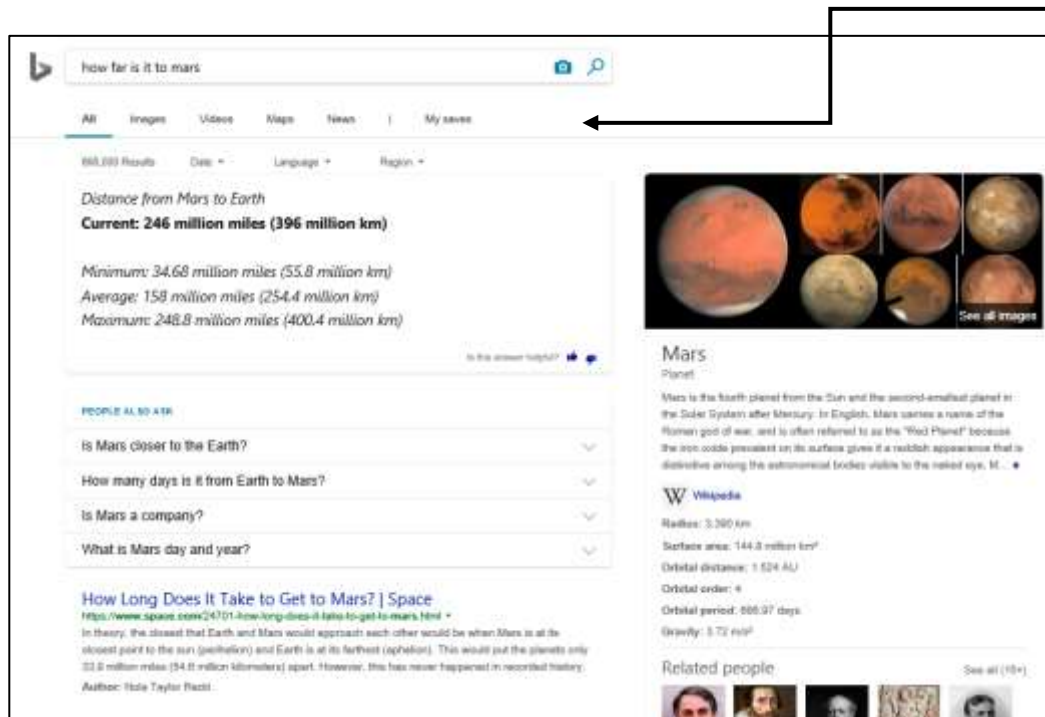


Bing

1. **Let's add a Tab for Bing:**
2. Look up to the top of your window. Above the web address bar, you can see a tab labeled with your search. Let's open another tab **by clicking on the grey slanted rectangle immediately to the right of your tab**



1. **Type in Bing.com** in the address bar
2. In the Bing search box **type in How far is it to Mars?** Press Enter on your keyboard.
3. Have a quick look at your results: this time we start with an earthly result! A map with directions to Mars, Pennsylvania, a Wikipedia article, plus most of the results we saw on Google. **Note: Bing has similar filters to Google**

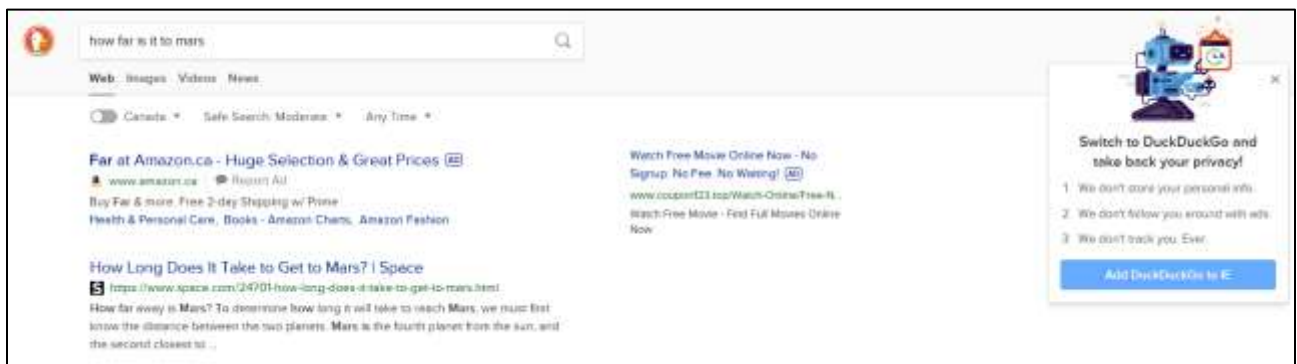


DuckDuckGo

1. Let's **open another tab**
2. Type in **Duckduckgo** in the address bar
3. **You should get a google search which includes the DuckDuckGo.com website. What just happened?**
4. **Yes! the address bar now also acts like a Google search box! That's a real time-saver.**
5. In the DuckDuckGo search **box type in How far is it to Mars? Press Enter** on your keyboard
6. **Have a look at your results:** this is a no-frills list with most of the same results we've seen so far.

Why use DuckDuckGo? It's an alternative web search service which blocks ad trackers and keeps your search history private. From:

<https://searchenginewatch.com/2019/04/25/whats-it-like-using-duckduckgo-in-2019>



Tabs

1. You should have **three tabs open** at the top of your window now. **Practice moving between them** by clicking on each one
2. Close a tab by **clicking on the X** on the right side of the tab

