

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 own 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> do 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 the web work, continue to practice your web searching, website navigation, and mouse skills, by looking at your results in detail, applying filters to your results, and exploring interactive 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.

Let's try a quick quiz question:

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

- a) Less than 1%
- b) 10-20%
- c) 50%
- d) 75%
- e) 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 **what else** is on the internet?

How big is the Internet?

It is 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 February 2022, one site estimated approx. 1.62 billion **indexed** pages. From <https://www.worldwidewebsize.com/>

However, there is a huge amount of the internet which is not indexed at all. This includes all the data behind security firewalls or password-protected websites. Examples include client databases in banks, private emails, or websites like Netflix where you need to login to gain access.

What we usually think of as the internet is the content indexed by search engines. Google is the most popular of all the web search engines. How does a search engine work?

There is no central directory to the internet so Google runs a program called a "web crawler" or "spider" or "bot" 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 uses your search words to find the most relevant results. Those results are based on many different factors: the meaning or intent of your query, relevance of content, quality of content, usability of content, context and settings. From <https://www.google.com/search/howsearchworks/>

Do you know:

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

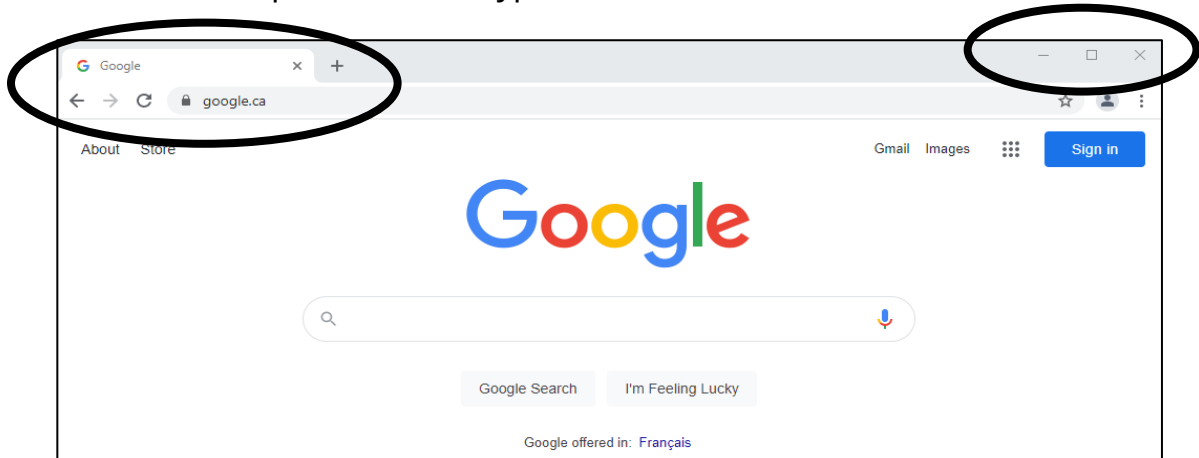
Web browsers are software which read a website and display it on your computer. Examples are Google Chrome, Microsoft Edge and Firefox.

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

Google makes both a browser and a search engine!

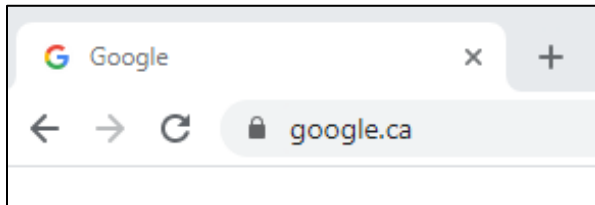
Google Advanced Searching

Let's start with a quick tour of a typical Browser Window:



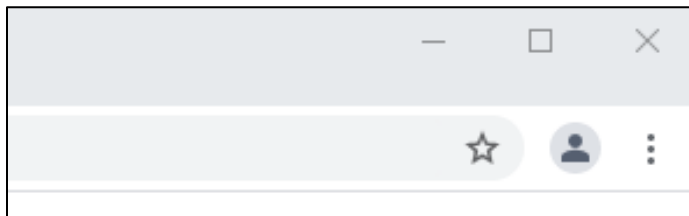
1. In the top left corner are:

- a. the **name** of the website – in this case, Google the search engine
- b. the **web address box** – google.ca
- c. the **back button** – a left arrow
- d. the **forward button** – a right arrow



2. In the top right corner are:

- a. The **minimize button** - looks like a minus sign
- b. the **maximize/resize button** – a square, or two squares
- c. the **close button** – an X
- d. the **More Options menu** – 3 vertical dots
- e. Optional: some browser include a **Home button** – a house icon, use this if you set a website to load every time you open your browser.

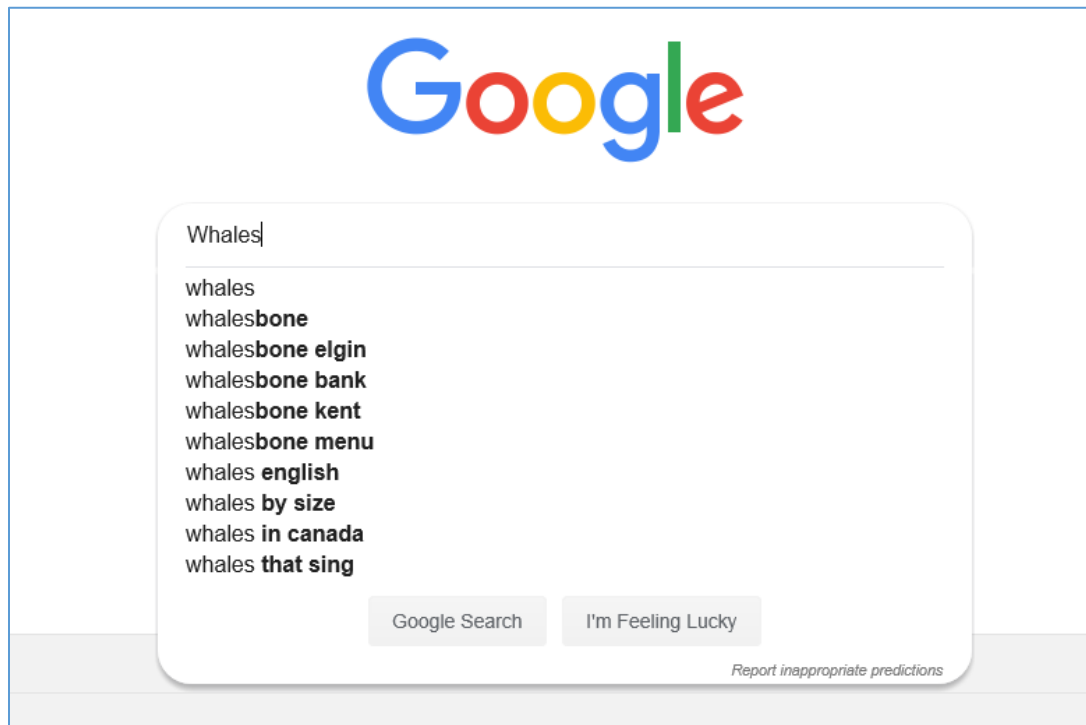


Now, let's get some practice with a Google search.

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 arrow (or back button)** to return to your search results



In my case, I have the following (yours may be slightly different):

- **information** about whales from the **World Wildlife Foundation**
- an encyclopedia style article on the right from **Wikipedia**
- scrolling down, I also find **videos**, **news** stories and more **articles** about whales

When you look at your results, do these seem like reliable websites?

Why or why not?

The screenshot shows a Google search for "Whales". The search bar contains "Whales" and the results show "About 727,000,000 results (0.60 seconds)". The top result is from Wikipedia: "https://en.wikipedia.org > wiki > Whale". Below this is a "Whale - Wikipedia" link and a collage of images including a whale skeleton, a whale's head, and various whale species. To the right is a "Whale" knowledge panel with a "Whale" title, "Animal" category, and a share icon. The panel contains a detailed description: "Whales are a widely distributed and diverse group of fully aquatic placental marine mammals. They are an informal grouping within the infraorder Cetacea, which usually excludes dolphins and porpoises. Whales, dolphins and porpoises belong to the order Cetartiodactyla, which consists of even-toed ungulates. Wikipedia". It also lists "Class: Mammalia", "Lifespan: Orca: 10 – 45 years, Humpback whale: 45 – 50 years, MORE", and "Speed: Orca: 56 km/h, Fin whale: 47 km/h". Below the knowledge panel is a "People also ask" section with four questions: "What are 3 facts about whales?", "What is the 5 biggest whale?", "Why whales are so special?", and "Are whale friendly?".

Exercise 2: Challenge – Try your own search!

Practice by repeating the exercise above with your **own choice of search**. What did you find? How different are your results from your neighbour's?

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 is important to take breaks when using a computer for any length of time.

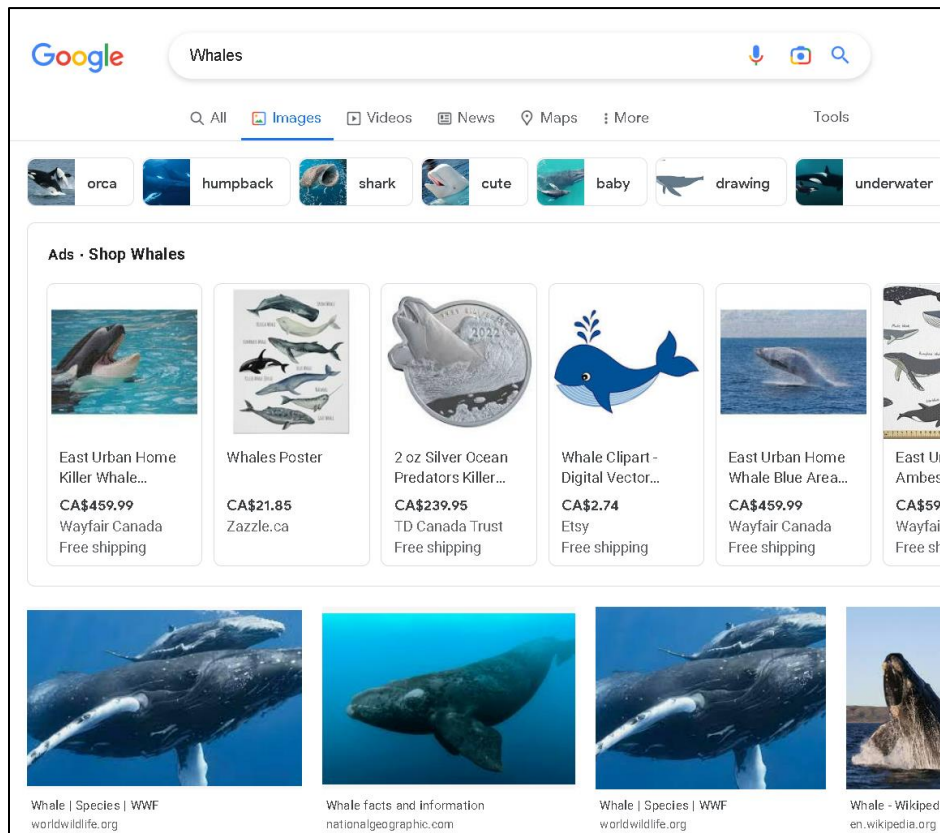
Take a minute now - shake out your hands and arms, stand up if you are able, and refocus your eyes away from your monitor to a point about 20 feet away.

Exercise 3: Filter for Images

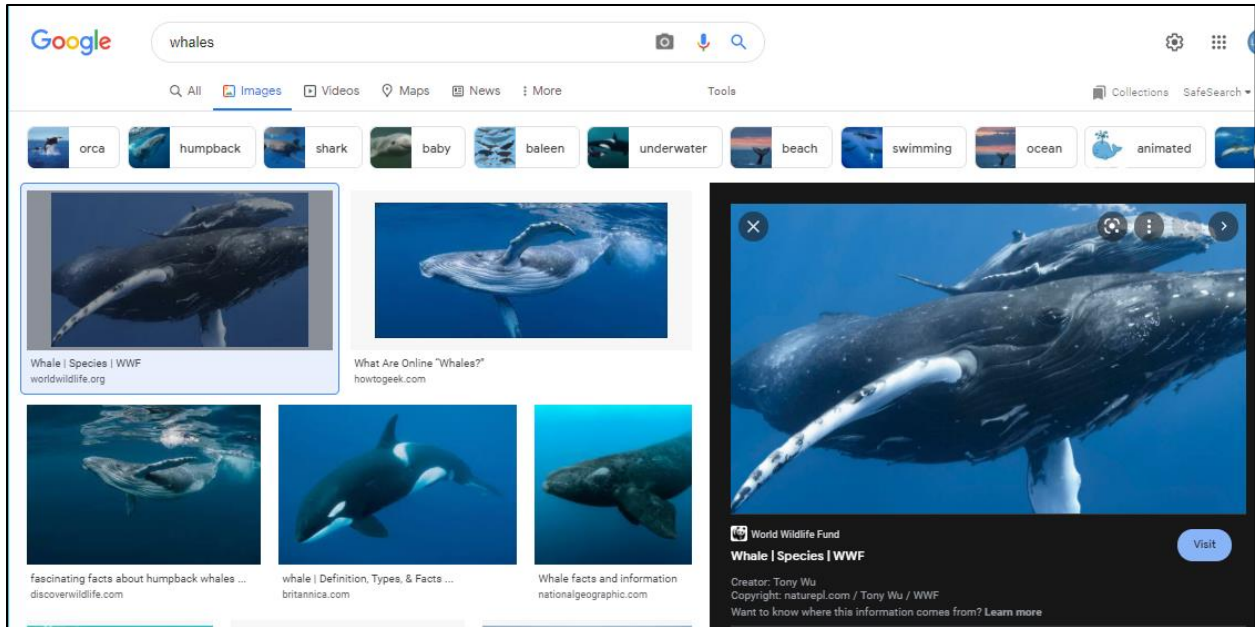
Our previous searches included a variety of results from webpages to images to news articles to maps, and more, depending on our search terms.

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.

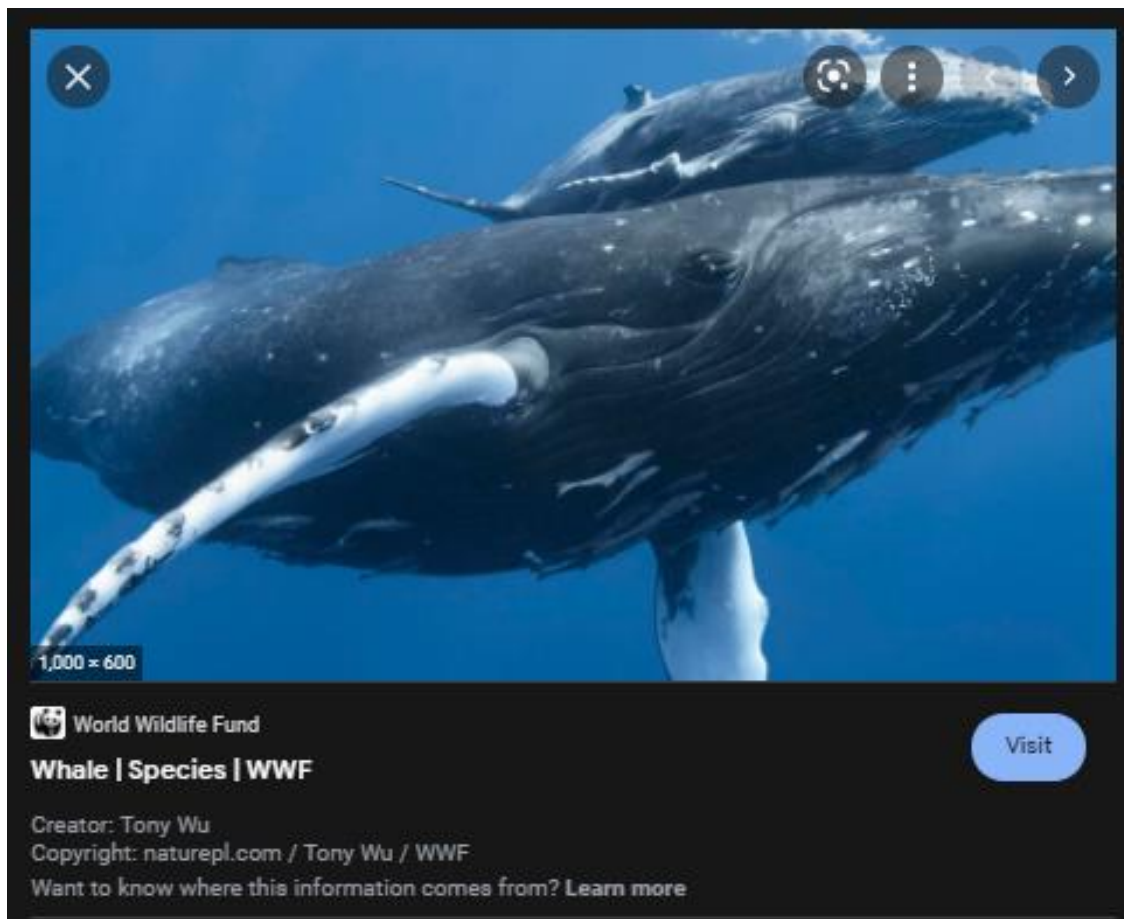
1. **Using Your Search from the Challenge**, click on the **back button** until you are back to your **First Search screen**
2. Under your search box you will see categories for your results:
3. All, Images, Video, News, Maps, More.
4. Click on **Images**



5. Have a look at **your results** and notice:
 - A page of "thumbnails" (small versions of the pictures)
 - Name of the picture
 - Website name



6. **Click once on a picture** (or thumbnail) to see a larger **Preview version** of the image

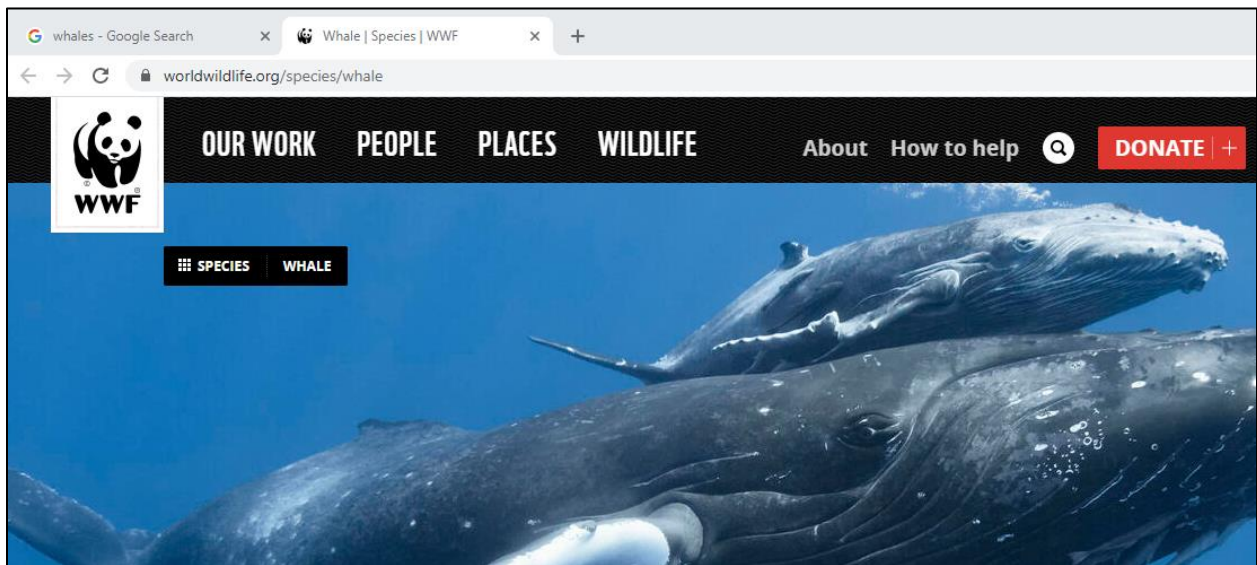


7. In the **Preview pane** you can do a number of things:
 - a. Close the preview by **clicking on the X** in the left corner of the preview
 - b. Or use the **right arrow** to see a larger version of the next thumbnail
 - c. Click on **Visit to go to the website** where the picture lives

NOTICE: this website opened in a **new Tab**.

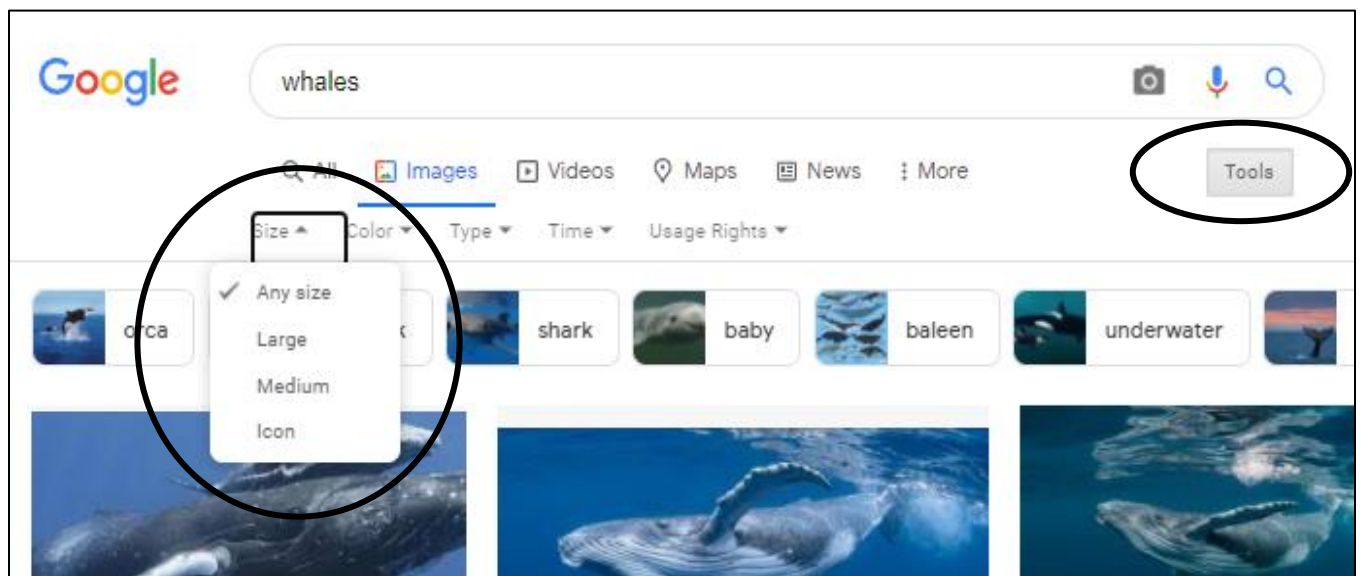
Your Google search is still there in the Tab to the left, your image web page is in the Tab to the right.

8. **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 tab** and **Scroll back to the top** of the page
2. Click on **Tools** to see more ways to filter your results:
 - a. **Size, Colour, Usage Rights, Type, Time, More Tools**
3. Click on **Size** to see the options. Now you can find large images to print out or save
4. Click on **Large** and **examine your results**
5. **Try out other tools such as Color**
6. **Experiment** with the Tools and settings for a minute or two

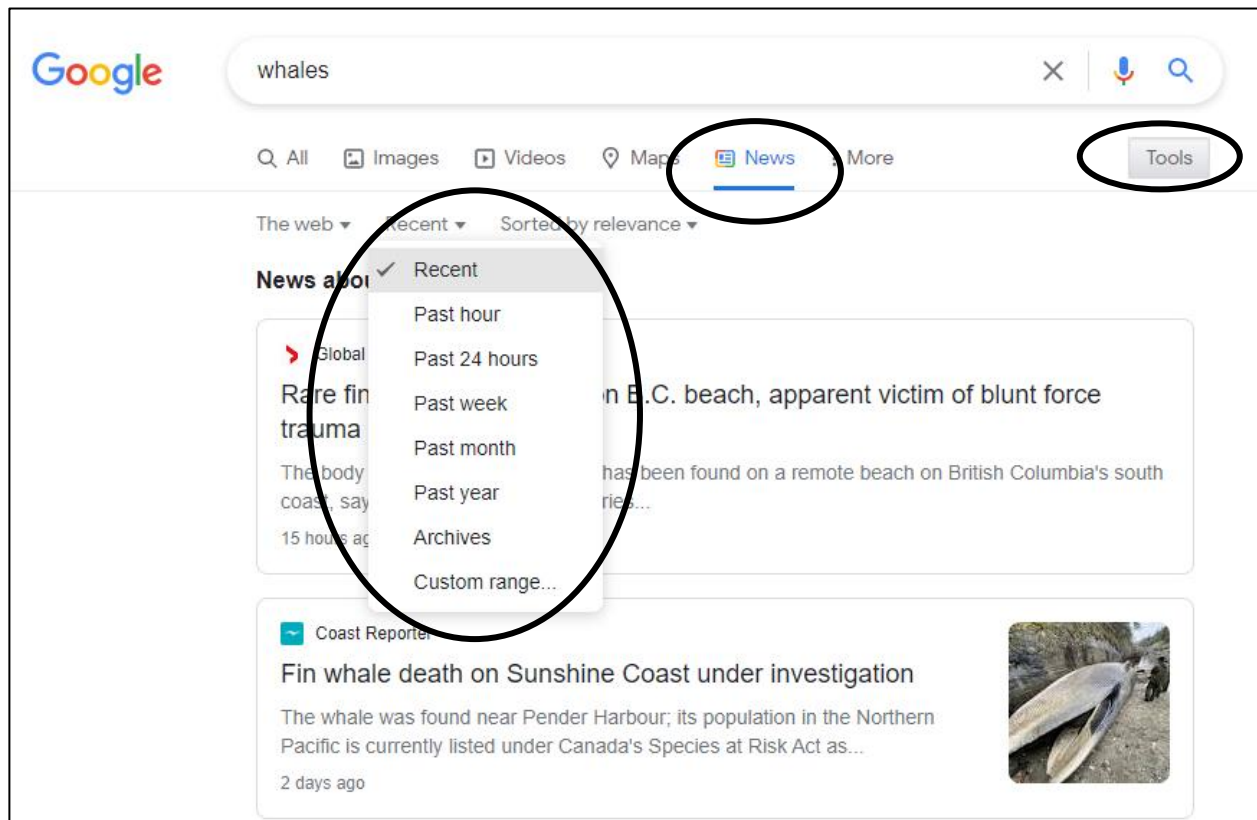


TIP: the size of image you choose will depend on how you want to use it. Small images are good for social media; large images are better for printing.

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...



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.

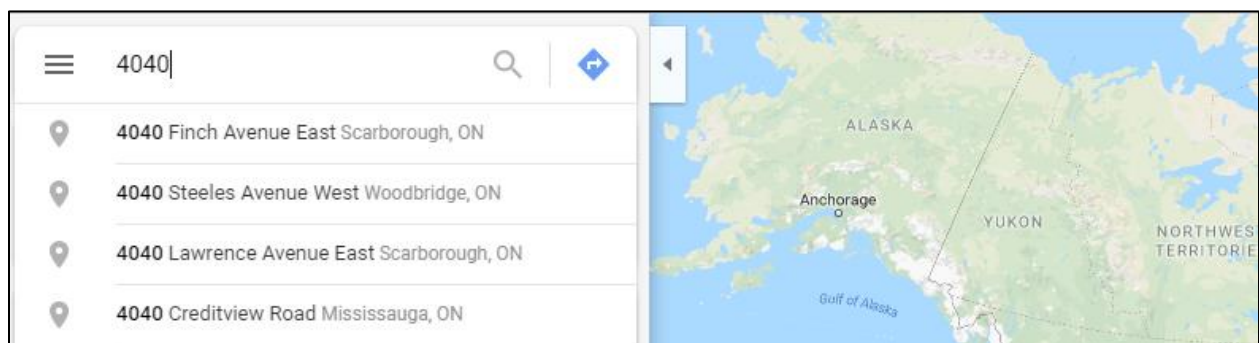
1. In your browser's address bar **type google maps** to perform a search for google maps.
2. **Did you notice** that we used the address bar just like a Google search box? This is a change made in recent years to say you even more time!
3. Click on the first result for: **maps.google.ca**
4. You will 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.

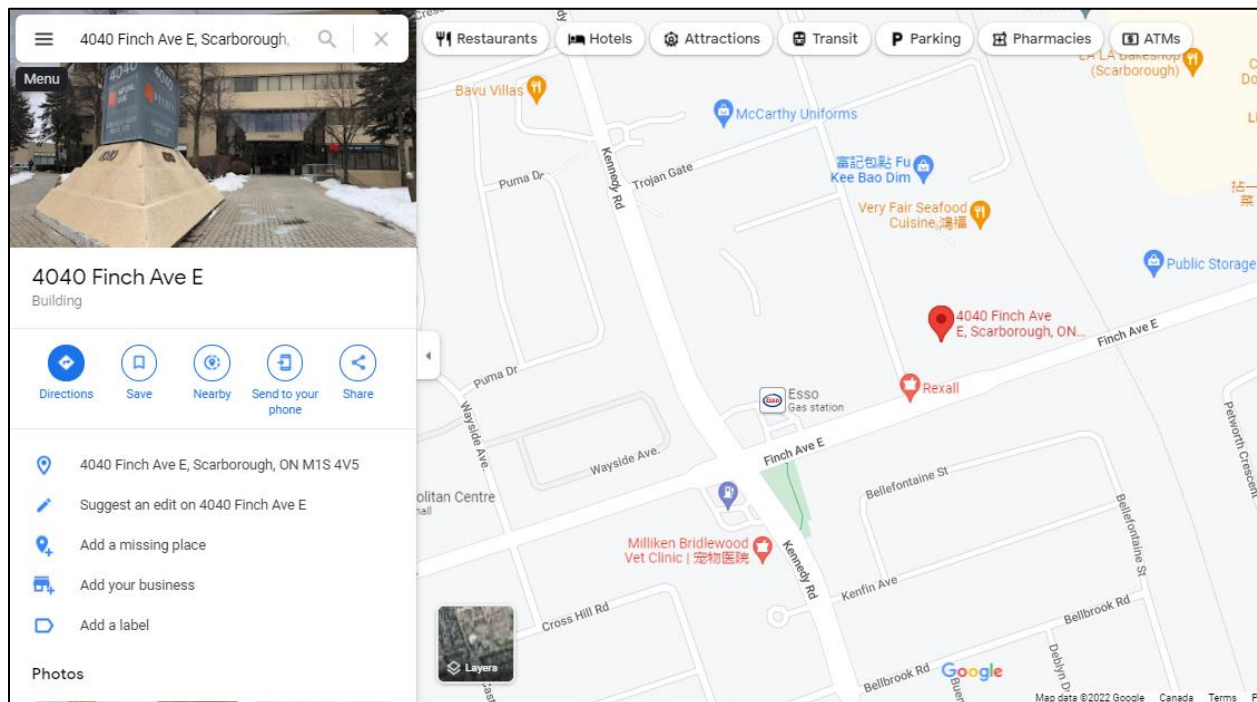
5. Search using **any address** you like:
Try your home address, this library, or anywhere in the world!

This is my example: **4040 Finch Ave East.**

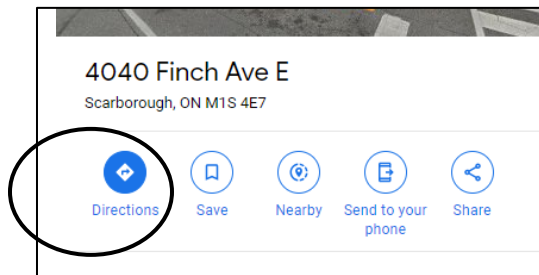
As always, **check the drop-down menu as you type** for suggested text.



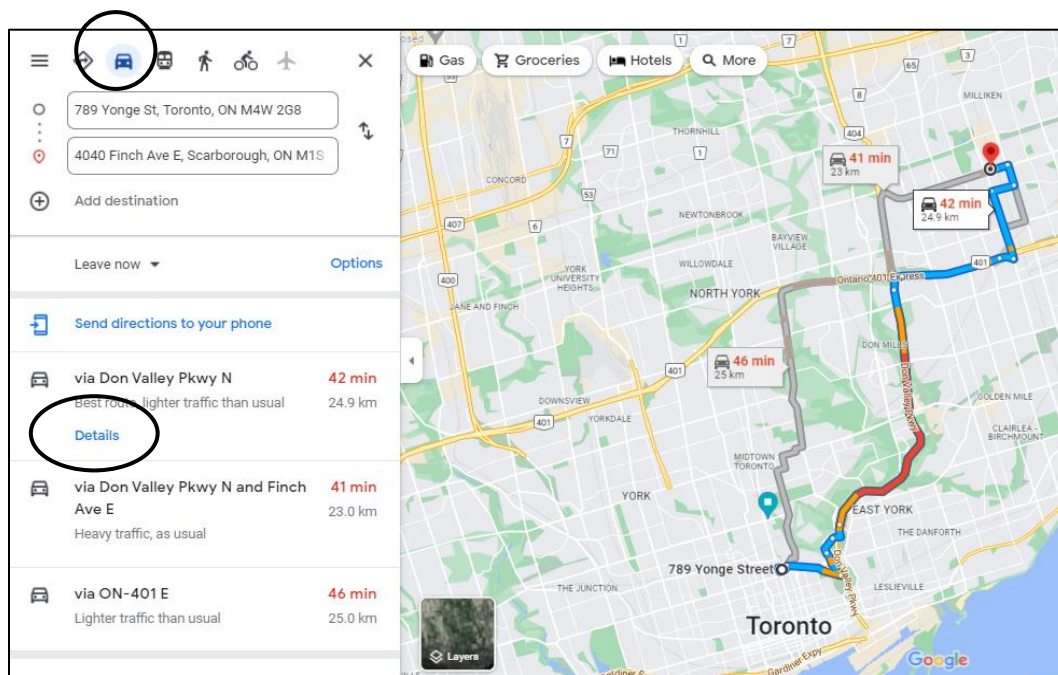
1. Stop and look at the results carefully. **What do you see?**
2. On the right side of the screen
 - a local map for your address and the surrounding area
 - a **red placemaker** indicates your search address
 - **local businesses** with links
 - often, a **picture** of the business if you hover over the link
 - **street** names and **traffic** direction
 - zoom tools and map scale in the lower right corner
 - a link to map layers, including a satellite map
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 with me: **789 Yonge Street**
3. **Let's look at the results** again, you will see:
 - Several recommended **routes with distance with travel time estimates**
 - Detailed descriptions for the **routes**
 - **Slow travel** stretches on the roads may be marked in yellow or red
 - **Filters for travel** by car, transit, biking, walking, etc.,
 - The opportunity to **change the time/date of travel, etc.,**
4. Take a **few minutes to explore and click**, zoom in and out with the scroll wheel on your mouse!
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 [available in print or as ebook](#)

My Internet for Seniors (2016) by Michael Miller [available in print or as ebook](#)

Online Courses

- Internet Basics from GCF Global
<https://edu.gcfglobal.org/en/topics/internet/>
- Google Maps from GCF Global
<https://edu.gcfglobal.org/en/google-maps/>
- Internet Basics from Digital Learn:
<https://training.digitallearn.org/courses/internet-basics>

Videos

What is the Internet

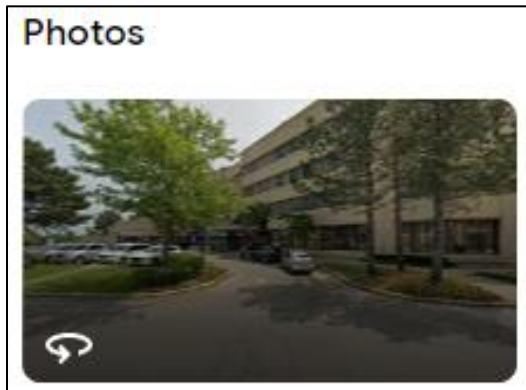
- <https://tinyurl.com/whatistheinternet1> (2.40 min)
- <https://tinyurl.com/whatistheinternet2> (3:44 min)
- <https://tinyurl.com/whatistheinternet3> (4.30 min)

Articles and more

- 21 Google Search Tips You'll Want to Learn
<https://www.pcmag.com/how-to/google-search-tips-youll-want-to-learn#3>
- 29 Google Map Tricks You Need to Try (for either mobile or desktop)
<https://www.pcmag.com/how-to/google-maps-tips-tricks>
- Google Maps Treks:
<https://www.google.com/maps/about/treks/#/grid>

Practice Exercises

1. Google Maps: Street View



1. Using a search of **your choice** (or our example 4040 Finch Ave East), **scroll down the left panel**, then **click on the photo** with the white circular arrow
2. This will open a **Street View** of your location. Hold down the **Control** button on your keyboard, then **Click, hold and drag your mouse** to spin and tilt your perspective on the picture

Notice: in the lower right corner, there are zoom tools and a **compass** to keep you oriented

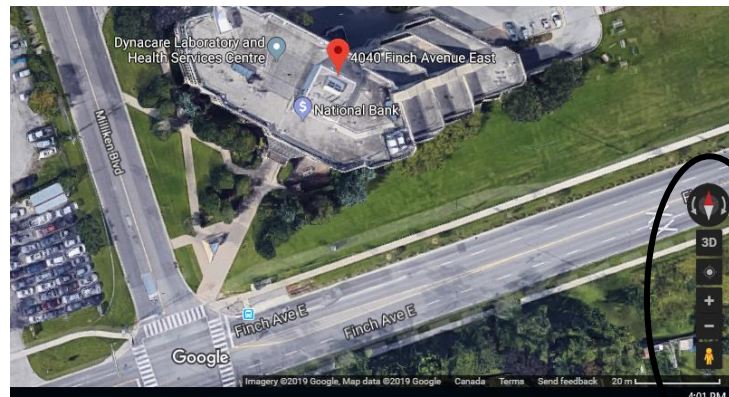
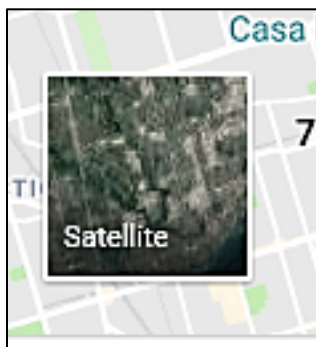
Notice: in the lower left corner is a little box which allows you to return to Map View and there is a **little person representing "where you are"** in the picture.

3. If you hover your mouse pointer over the road, you will see a **grey arrow, click to travel along the street.**
4. **Practice with your mouse** – it takes a while to get used to but it can be fun to do some virtual exploring this way.

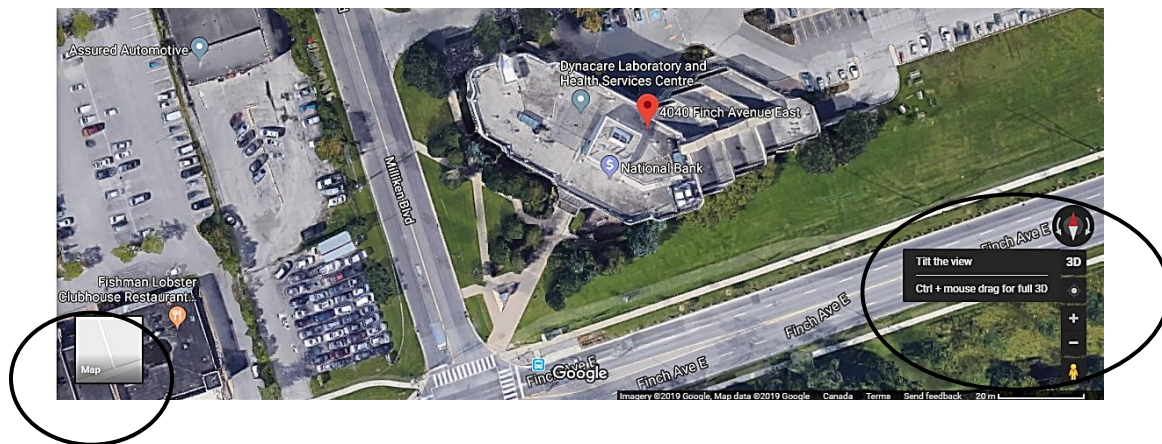


2. Google Maps: Satellite View and 3D

1. Using Chrome and Google Maps, type in any 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 use the + and - zoom buttons** on the lower right corner of the map.
4. Notice the level of detail!



5. Above the + and - zoom buttons, you can **click on 3D** to see a 3D version of the map [OR go to Satellite/Layers -> More -> turn on Global View]
6. 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!
7. 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



3. Search Engine Comparison in Tabs

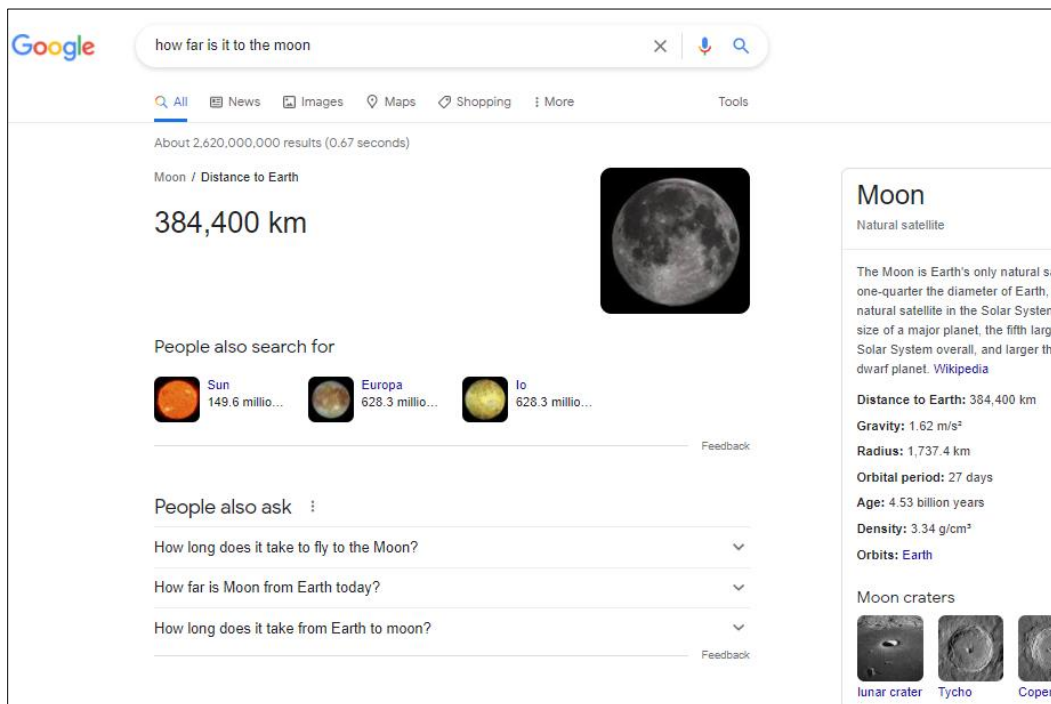
We focussed on **Google** as a search engine because it is the one used most often: approximately 70% of all searches, in 2020. What about the rest of the searches?

Bing (from Microsoft) powers approx. 13% of searches, Baidu (China) with 12.5%, **Yahoo** with 2%. Other search engines in the top ten include **DuckDuckGo**, known for its focus on privacy. From <https://netmarketshare.com>

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

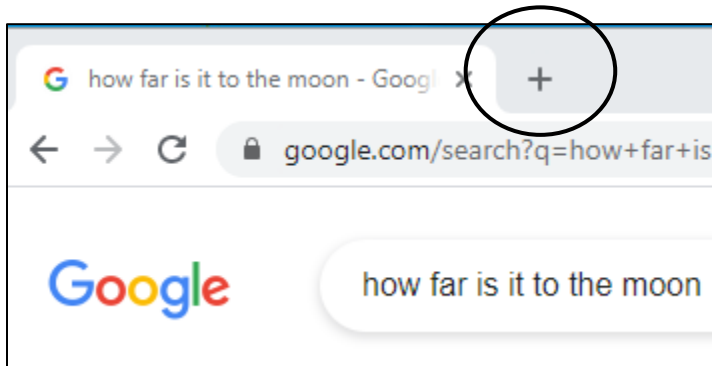
Google

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 the moon**, and 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 an answer in km, a Wikipedia article, articles 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 plus sign + 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 the Moon**, and press **Enter** on your keyboard.
3. Have a quick look at your results: this time we start with an earthy 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**

A screenshot of a Bing search page for the query 'how far is it to the moon'. The address bar shows 'bing.com/search?q=how+far+is+it+to+the+moon&form=QBLH&sp=-1&pq=how+far+is+it+to+the+moon&sc=6-25&qs=n&sk=&cvid=07A4E1EE...'. The search bar contains the text 'how far is it to the moon'. The results page shows 25,300,000 results. The top result is 'Moon · Distance to Earth' with a value of '384,400 km'. Below this is a section 'People also search for' with five items: Sun (1 AU), Io (4.200 AU), Ganymede (4.200 AU), Europa (4.200 AU), and Phobos (77.79 million km). To the right is a 'Moon' card with a Wikipedia article snippet and a table of orbital data.

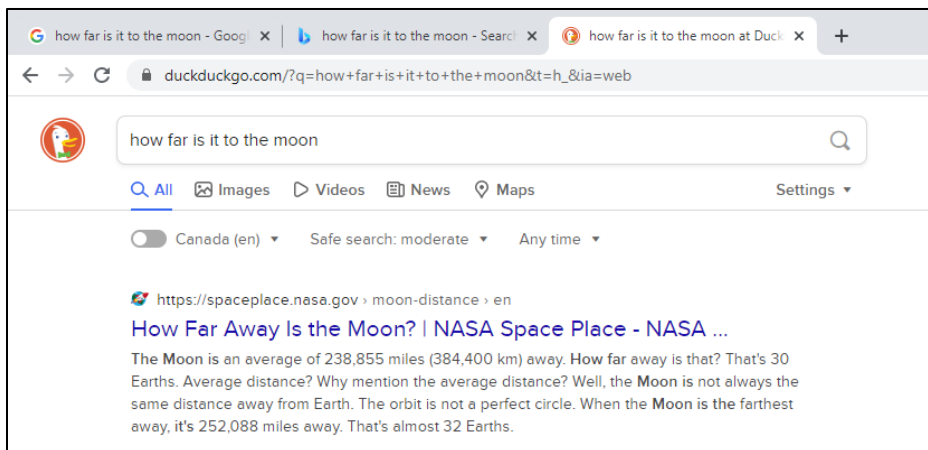
Orbits	Orbital period	Radius
Earth	27.32	1,080

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 the Moon** and 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

