

Grade 7 Review: Surfing the web

Internet... a word that dominates most computer-related conversations. For good reason, too: Since its appearance in the 90s, it has become an integral part of our lives.

But what exactly is the Internet? It's a global network of millions of computers that exchange information. It's the largest computer network today and it connects thousands of private, governmental and academic networks. On the Internet, you can find a huge amount of information, photos, videos and music. What's more, you can call your friends, send emails, instant messages, etc.

How do I get online?

Accessing the Internet is very easy and anyone can do it. First, you need to have a computer that can connect to a network either with a cable or a wireless connection. Then you need to have a phone line. Don't forget the router: the networking device that will connect your computer with the phone line. And finally, you also need an ISP (Internet Service Provider) that will provide you with access to the Internet.

An ISP (Internet Service Provider) is the telecommunications company that will provide you with access to the Internet. Browse the Internet

To start accessing the Internet, you need a web browser.

A web browser is a program that allows you to search the Internet for information.

To open a browser:

- Click the Microsoft Edge icon on the Taskbar.
- >The home page of the browser opens.

Address bar

- Type the address of a web page you want to visit or see the address of the current web page.

Favourite

- By clicking the Favourites button you can manage your list of favourite web pages.

Home

- This button takes you to the start page of your browser.
- To stop loading a web page press Esc

Visit a website

To visit a website, first you need to know its web address. The web address or the URL (Uniform Resource Locator) is like the address of your home or a shop. It's an easy way to remember and open a specific web page. The advantage of the URL is its universality: you can open the same web page and see the same content no matter where you are in the world.

A typical web address is

`https://www.google.com`

http (hypertext transfer protocol) or **https** (hypertext transfer protocol secure) is a communication protocol. It helps web browsers to communicate with servers that provide information in a specific format.

WWW.indicates that this server provides information that can be searched and read through web browsers. **www** stands for World Wide Web.

.COM is the extension of the web address that shows the category (commerce, education, government or organization) or the country of the website. Companies in the USA use .com, schools and universities use .edu, sites in Mexico use .mx and in Germany.de.

google is the main part that shows the name of the company, school or organization.

To open a web page:

- In the address bar, type the address of the web page you want to open, e.g. www.binarylogic.net and press Enter

Instead of a URL, sometimes you may come across an IP (Internet Protocol) address. It's the digital address of an internet device. For example, the IP address for

www.google.com is 172.217.17.46. If you type this instead of the URL, you will visit the same place!

Tim Berners-Lee, while working at CERN in 1989, came up with the idea of the "world wide web". All computers could be connected and everyone could have access to their information.

Search engines

In order to open a web page, you have to know its address. But the Internet has hundreds of millions of web pages, so it's impossible to remember the web address of every web page you are interested in. That's why search engines exist.

Search engines can help you search for and find websites that are related to specific keywords you type in. There are several search engines available, but the most popular ones are Google and Bing. Let's try one!

To use a search engine:

- Open a web browser (e.g. Microsoft Edge).
- In the Address bar, type www.google.com and press Enter
- The Google website will appear.
- In the search text box, type the subject you want to find. For example, Space and click Google Search or press Enter
- A list will appear with websites containing the word Space.
- Click the website you think is the most relevant and it will appear on your screen.

Use the Back and Forward buttons to go to the previous or following web pages without typing their web addresses again.

Search engine results

In order to have better search results, it's a good idea to type more than one word, to make your search more specific. For example, type "solar system" or "planets in our solar system" instead of the general term "planets". Search engines are very smart and try to find the best web pages for what you need.

Evaluate web resources

- Not everything you read and see online is true. That's why it's so important to be a critical thinker rather than a passive recipient of information.

Here is a list of criteria which will help you to check if the online source you're using is reliable.

Accuracy

- Check what the purpose of the website is and why it was produced. Ask yourself if the author is qualified to write on the given topic. Check if the information is free of grammatical, spelling, or typographical errors.

Authority

- Check if the name of the author is displayed on the web page. Identify the URL of the web page and prefer those which belong to the categories of education, government or organization.

Up-to-dateness

- Check when the website was last updated or if there is a clear indication of how current the information is.

Objectivity

- Ask yourself if the information covered is factual or is it an opinion. Consider whether the web page is a cover for advertising and if so, the information might be biased.

Favourites

- If there is a website that you want to visit often, you can add it to the list of your favourites.

To add a website to Favourites:

- Go to the website you like, e.g. www.space.com.
- Click the Add this page to favourites button.
- The Favourite added menu will appear.
- Type a name for this website and click Done.

A hyperlink is usually a word, phrase picture, that when clicked, redirects you to another web page. A text hyperlink is usually underlined or in blue to make it easier to use.

Home page

- When you open Microsoft Edge or any other browser, there is a web page on the screen. This is the home page of the browser and it is set by the program. You can choose your own home page.

To change the home page:

- Click the Settings and more button and then click Settings.
- Click Menu and then click Appearance.
- In the Customize toolbar section, turn on Show home button.
- Type the web address of the main page you prefer and close the Settings tab to apply changes.

Online resources

- The Internet is an amazing source of information. If, for example, you need material like images and sounds for a homework assignment, it's very easy to find them on the Internet

and download them onto your computer. You already know how to find websites in general. Now it's time to see what you can do with all this information.

Wikis are online encyclopaedias. You can go to them and find information on whatever subject you like. There are a lot of wikis on the Web that offer general knowledge; there are even wikis for video games.

To use a wiki:

- >Go to <https://www.wikipedia.org/>
- In the search text box, type a keyword for the subject you want, e.g. Black hole and click the Search button or press Enter
- The result will appear on the screen. 4 If there is more than one subject, click the one you want.

Online encyclopaedias come in many languages. So, if you can't find something in one language, maybe you can find it in another.

When you search the Web for a subject, don't only look on one website. Try to visit as many as you can and cross-check the information. Remember also that people write these articles and they are not always objective.

To gather information:

- Select the part of the text you want.
- Right-click it and click Copy.
- Paste it into a Microsoft Word document or a text editor.

To search the Web for images:

- Open Microsoft Edge and use a search engine to find what you want, e.g. type www.google.com in the address bar and press Enter.
- Click Images, type some keywords for the picture you want to find, e.g. Black holes 3 and click the Search button or press Enter.

Filters

- Color finds color or black and white images. It also categorizes images according to the base color, like orange images or blue, etc.
- Size finds images according to their size. Really big, medium or small images. This can be useful, especially if you want to find images for presentations, videos or text documents.
- Usage Rights helps you find content that is free to use.
- Type finds images according to their type, e.g. drawings, photos or clip art.
- Time helps you find content that was uploaded during a certain period of time.
- When you find the information you want, don't just copy-paste the text. Try to read about the subject and write it in your own words. Firstly, it's not moral to just copy someone else's work and present it as your own and secondly, you will learn the subject better if you study it and try to write something on your own.

If you like a photo and want to save it:

- Click the image to see a preview of it.
- Right-click the preview of the image and click Save image as to save it.

To search for videos:

- Using Google search engine again, type your keywords, e.g. Black holes and press Enter.

- Click Videos.
- Click the video you find interesting.
- Click the Play button to watch it.

You can watch thousands of videos on www.youtube.com in the same way. If you want to download a video, you'll need a program called "Video download helper". But download ONLY videos that are free to use.

To download sounds:

- You have to visit a website that has free sounds, like www.soundjay.com.
- Select the category of sounds you want.
- Click to hear the sound live stream before you download it.
- If it is the one you want, click to download either in a wav or an mp3 format.
- The sound file will be saved on your computer automatically.
- Click Options and then click Open to open the file.

Cool stuff with Google

As time passes, search engines are becoming more and more useful not only for searching for websites, but also for learning and understanding many things. With their help, you can now find definitions for words, translate web pages or even solve difficult mathematical equations.

To find definitions of words and synonyms:

- Open a browser, e.g. Microsoft Edge.
- Go to www.google.com
- In the search box, type define or definition or what is and the word for which you want the definition.
- Press Enter
- The definition of the word will appear on your screen.

The technology we use for the network behind the Internet today was developed in the 60s. ARPANET (Advanced Research Projects Agency Network) could send "packages" of data and connected four universities in 1969!

To translate a word, phrase or text:

- Open Microsoft Edge and in the Address bar type <https://translate.google.com>.
- Select the language you want to translate from (e.g. English) and choose the language you want to translate to (e.g. Spanish).
- In the text box, write what you want to translate.
- >The translated text will appear automatically.

In the Translate from list, click "DETECT LANGUAGE" and Google will automatically find the language you're using.

To calculate math equations:

- Open Microsoft Edge. Go to <https://www.google.com>
- In the Search box, type the mathematical equation you want to solve and click the Search button.
- The solution for the equation you have written will appear.