



Tech Savvy Seniors

INTRODUCTION TO THE INTERNET

PART 1 BEGINNERS GUIDE

TOPIC: INTRODUCTION THE INTERNET - PART 1

WELCOME TO THE INTERNET!

For people who didn't grow up with computers, the internet can seem like a scary place. There is a world of unfamiliar jargon and new ways of communicating to contend with, and sometimes it can seem overwhelming. The truth is, however, that the internet has become quite user-friendly in recent years, and anybody is capable of accessing millions of websites, sending emails, shopping and banking online, and much more.

WHO IS THIS WORKSHOP FOR?

You've heard of the internet but aren't really sure of what it can offer you, let alone how to get connected to it, which type of internet connection to choose, or how to use it. This workshop explains it all.

WHAT YOU'LL NEED

An internet-connected laptop or desktop computer; either your own or supplied by the workshop organisers. You may need to share a computer with others in the workshop.

WHAT YOU'LL LEARN

This workshop will walk you through the very basics of the internet: how it works, how to get online and how to surf the web. At the end, you should be able to sign up for an internet service and access and search the internet on your home computer.

TIMETABLE

The workshop will be broken into five sections, with a break in the middle. Feel free to ask questions at any time!



Subject: What is the internet? Duration: 15 minutes

Subject: What can I do on the internet? Duration: 20 minutes

Subject: How do I connect to it? A look at different types of internet connections. Duration: 20 minutes

Break. Duration: 15 minutes

Subject: Navigating around the web. Duration: 35 minutes

Subject: Performing a web search. Duration: 25 minutes

Subject: Summary. Duration: 10 minutes

Total. Duration: 140 minutes

SUBJECT: WHAT IS THE INTERNET?

Time: 15 minutes.

OVERVIEW:

Put simply, the internet is a massive web of connected computers, all of which can talk to each other. When you connect to the internet, your computer can talk to other computers and they can talk to your computer.

Your computer (or another connected device, like a smartphone) talks to the internet via an internet service provider (ISP), such as Telstra. That ISP has thousands of other subscribers that you can talk to, but it also connects to other ISPs around the globe, so you can talk to their subscribers as well.

The network means that you can connect to somebody on the other side of the world in a fraction of second.

In practice that means you can send somebody a letter (an 'email') that arrives pretty much straight away. You can video chat or voice chat with somebody on the other side of the world almost instantly. You can download movies and music from other computers, anywhere.

Most importantly, you can surf the world wide web. That's the network of millions pages of content that you can find online. It's like the world's largest library, shopping mall, banking centre and theatre, all accessible from your home computer.



THE ORIGINS OF THE INTERNET

Although it only became widely accessible to the public in the 1990s, the origins of the internet stretch back to the 1960s, when US defence agencies tried to build a network of computers that could not be taken down by enemy attacks. The idea behind it was ‘fault tolerance’: if one network link failed, then the data could be automatically re-routed through another link.

From this technology, the internet of today was born. It’s an electronic network that can add new devices like your home computer at any time, and will dynamically and intelligently figure out a way to get data from point A to point B across multiple ISPs.

SUBJECT: WHAT CAN I DO ON THE INTERNET?

Time: 20 minutes.

THE INTERNET AND EVERYDAY LIFE

New uses for the internet are being invented every day. There are literally hundreds of millions of web pages and services available. It’s very easy to sink hours, days, weeks and months exploring all the internet has to offer.

At the beginning, though you might want to keep it simple and try:

- Sending emails, which are letters that can be sent for free to anyone and arrive instantly
- Looking up news, weather, health information, lotto and sports results, government information and forms
- Ordering groceries, electronics, white goods and pretty much anything else you can imagine from online stores
- Searching for information on just about any topic, such as train timetables, the date of your next bowls game, phone numbers, recipes, and just about anything else you can think of!
- Doing all your banking, taxes and business online
- Sharing your photo and video collection, and seeing the shared collections of others
- Talking or video chatting with online friends – at any time, for free
- Participating in discussions on topics you find interesting, with people from around the world
- Downloading and watching movies, reading book reviews or watching sports.



INTERNET ADDRESSES

The internet is really quite friendly to non-technical people these days, but one slightly technical element you might have to face is internet addresses and domain names. These look scarier than they really are: they're actually just ways for computers to find each other on the internet, kind of like phone numbers for computers.

An internet address, also known as an Internet Protocol (IP) address, is your computer's unique identifier on the internet. It usually looks something like this: 203.1.54.124 (though obviously the numbers will be different for you). Funnily enough, those numbers actually translate to something like a street addresses. If you think of it like a letter, the first number represents the country, the second the town, the third the street name and the last the specific computer.

Of course, it's not quite that simple: with the internet address it more represents who you're connected to (which ISP and which telephone exchange) than a geographic location.

Luckily, the inventors of the web figured that we humans aren't very good with such numbers, and invented the domain name system. That's the system that represents web locations in terms like www.telstra.com.au. So you'll probably never have to deal with IP addresses. We'll talk more about domains on page 9.

SUBJECT: HOW DO I CONNECT TO THE INTERNET?

Time: 20 minutes.

WHAT YOU NEED TO CONNECT TO THE INTERNET

To be able to access all the internet has to offer, you will need an internet account with an internet service provider (ISP). ISPs like Telstra provide these accounts usually for a monthly fee, much like a phone service. The fee depends on the type of connection you have. Depending on the service type (see page 5), you might also need to have somebody come and install a line into your home.

You will also need what's called a modem (or modem router). Modem is short for modulator/demodulator. It's a small box that converts data signals from your computer to something that can be sent across the internet.

Your ISP will be able to sell you a modem when you set up an account with them. But if you later change ISPs, you can usually continue to use your modem without buying a new one.

You don't need to install any software on your computer. Your computer already has everything you need to access the internet.



Once you have an account and a modem set up (the ISP will guide you through setting up the modem), you just have to plug your computer into the modem to access the internet. Most modems also have WiFi, which lets you connect your computer wirelessly.

TYPES OF INTERNET SERVICES

There are a number of different ways to access the internet. Many of you may be familiar with dial-up, but there are also newer, faster ways.

There are five major types of internet access:

- Old fashioned dial-up, which makes telephone calls to an ISP and uses coded screeches and squeals to transmit data. You can't make or receive phone calls while connected via dial-up to the internet.
- ADSL, which uses a special modem to transform your existing phone line into a high-speed phone line. Because it is a broadband connection, you can chat on the phone at the same time you use the internet. ADSL is the most common type of broadband connection and the easiest to set up at home. It's available in many areas across Australia. Most ADSL services require that you have a phone service, but there are also so-called 'naked' DSL services that require no phone service.
- 3G/4G which uses mobile phone networks to connect you to the internet.
- Satellite, which transmits data from satellites.
- Cable, which uses Foxtel or Optus cables for data.
- NBN, which transmits data via a mix of technologies.

Not all services are available in all areas. Your ISP will tell you which ones are available to you.

While different internet connection services have strengths and weaknesses, they all connect you to the same internet. It doesn't matter whether you're on ADSL cable or the NBN, the internet is still the same.

DIFFERENT SPEEDS AND QUOTAS

When signing up for an internet account, you may be dazzled by the number of different and confusing options available.

There are different speeds and different monthly quotas available on different accounts.

The speed of a connection determines how fast web pages appear. It also can affect things like the quality of video chats.

Speeds are measured in kilobits per second (Kbps) or megabits per second (Mbps), with 1Mbps equal to 1000Kbps. A dial-up connection works at 56Kbps, while ADSL can go as



fast as 24Mbps – more than 400 times faster than dial-up. The NBN can be up to four times faster than ADSL, depending on your NBN connection.

The monthly download quota determines the volume of data and media you can download before your ISP either cuts you off, slows down your connection or charges you extra (depending on the specifics of your internet account agreement).

Volumes are measured in gigabytes (GB) and sometimes megabytes (MB), where one GB is equal to 1024MB. You're not likely to go over your limit just looking at web pages and sending emails, but if you watch a lot of online videos you might reach your monthly limit.

WHAT ACCOUNT IS RIGHT FOR ME?

Which account you should get really depends on what you want to do on the internet.

If you just want to browse the web and send a few emails, then a 'light' and low-volume account will be enough.

If you want to download a lot of programs, watch videos online and video chat with family and friends, then you need a higher-level plan.

Many ISPs allow you to upgrade your plan at any time, so it's often a good idea to start low. If you find yourself using up your monthly data allowance consistently, you can always upgrade.

You can find more information about choosing an ISP account in the Managing Your Internet Costs handout.

DIAL-UP AND BROADBAND

Broadband is so called because it's fast – much faster than dial-up because it uses a much wider 'band' to transmit data. Where a website might take 30 seconds to appear on dial-up connection, on broadband it would appear almost instantly.

Just as importantly, broadband is always-on. With dial-up you have to make a call (and pay a call charge), but a broadband account is always connected. You can just walk over to your PC and use the internet at any time.



SUBJECT: NAVIGATING AROUND THE WEB

Time: 35 minutes.

USING YOUR WEB BROWSER

Now we get to the fun part! Let's try browsing the web.

Once the internet connection is up and running you need to start up your web browser, which is a program on your PC. On a Windows computer, that means clicking the Edge icon. Edge is the latest version of Internet Explorer and comes with Windows 10 computers. On Macintosh computers, start the Safari browser.

A web browser is your portal to the internet. It's what lets you view web pages and follow links within pages (you'll see what we mean in a moment).

Edge and Safari aren't the only web browsers: there's also Mozilla FireFox, Google Chrome, Opera and a number of others. But Edge comes with your Windows 10 computer, so we'll start with it.

Once the browser is started, you'll see an Address bar in the middle of the window at the very top. This is also the Search bar, and where we will type the address of the site you want to visit.

On most computers, there's a default website that the browser will automatically go to when it starts. For example, most Windows computers will automatically load the MSN web page. We can change the default page (called your Home page) later.

We'll start off by browsing Wikipedia, the internet's most popular free online encyclopaedia. While traditional encyclopedias are written by academics and experts, Wikipedia is created and continually updated by general internet users, so the information is up-to-the-minute. Surprisingly, perhaps, it's also fairly accurate too.

MOVING AROUND A WEB PAGE

Take your mouse pointer and click on the Address bar. Now into the Address bar type www.wikipedia.org, then press Enter.

The Wikipedia main page should load.

You'll notice that some words on the page are highlighted in blue (and sometimes underlined). These are called hyperlinks – they take you to another page when you click on them. When you scroll over them with your mouse, you'll see that the pointer changes to a hand to indicate that a link is present.



Pictures can also be hyperlinks. If a picture is a hyperlink, your mouse pointer will change when you move over it.

Hyperlinks are a key element of how the web works. You don't have to type in the address of every page you visit: in fact you rarely have to type in any addresses at all. Instead you follow the hyperlinks that lead you between sites and to new pages. That's why it's called the web.

We want to go to the English page, so take your mouse pointer to the word English and left-click on it.

Now the Wikipedia page will load. You see today's featured articles, and a host of blue hyperlinks embedded in the page. Clicking on any of these will take you to a new page.

You can also scroll up and down using the Scroll bar on the right-hand side of the window if there's too much information to be seen on your computer screen. Left-click on the bar and hold the mouse button down, then move the mouse up and down to scroll.

SEARCHING A WEBSITE

You can also search Wikipedia for a topic you're interested in. At the top right of the page, you see a bar with the words Search Wikipedia in grey. Take your mouse pointer to that bar and click on it. Then you'll be able to type in a topic of interest to you. It can be anything (Wikipedia covers a lot of topics). For example, you could type dogs in and it will take you to the page on dogs.

This is your both your first web page and your first exposures to search! We'll talk more about searching the web in the Introduction to the Internet Part 2 workshop. But for now, there's one last thing you need to know about navigating.

At the top of the browser window you'll see a big Back arrow. Next to that is a Forward arrow.

The Back arrow takes you back to the last page you were at. So if you clicked on a hyperlink to take you to another page, and want to go back to the previous page, then click on the Back arrow. If you have gone back, but then want to go forward again, click on the Forward arrow (the Forward arrow won't be clickable unless you've gone back first).

DOMAIN NAMES

You may be wondering what the whole `www.websiteaddress.com` thing is all about. Those are called web addresses, domain names or sometimes URLs (uniform resource locators).

Domain names exist because people aren't very good with numbers. It's easier to remember `www.telstra.com.au` than it is a numerical internet address like `61.9.172.60`. So the domain name system (DNS) was invented to make site names easier to remember.



Around that, some conventions were built, although it's not a strict rule and not all sites follow it.

The www at the beginning indicates that the address points to a site on the world wide web.

The .au at the end indicates that the site is in Australia; sites in Britain, for example, typically end with .uk. US sites have no country indication.

The .com indicates it's a company. There are alternatives like .org (organisation), .gov (government), .edu (educational institution) and more.

You may have also noticed, when you type the address into the browser address bar, that the browser adds http:// to the beginning. This is not something you need to worry about, it's just the way the browser indicates that it's using the hypertext transfer protocol (HTTP), which is how web pages get linked to each other. You can just ignore it.

SUBJECT: PERFORMING A WEB SEARCH

Time: 25 minutes.

HOW TO FIND WHAT YOU'RE LOOKING FOR

If you went and looked at the Wikipedia page, you'll have had your first exposure to internet search. You're not expected to remember the address of every site you visit, nor do you have to trawl through directories of websites. To find pages relevant to a topic of interest to you, you just have to perform a search.

There are a number of popular web search tools, but the most popular is Google.

To search the internet with Google, type www.google.com into the Address bar of your web browser.

The Google main page will appear. In the middle of the page is the Google Search bar.

Take your mouse pointer to the Search bar, click on it, type in whatever it is you're interested in searching for information on, then press Enter. It can be several words or one, and you'll get better results the more specific you are. For example: new homes in Armidale will produce good search results.

The Search Results page will appear. Google will respond with pages it thinks are the most relevant to your search terms. The Results page will have clickable blue links to a host of web pages.

At the top of the page are ads, which are highlighted in the page.

If a web page description looks right to you, move your mouse pointer to the blue link and click on it. You can always come back here by clicking on the Back arrow in your browser.



You can see more results by scrolling down and clicking on Next. Google tries to prioritise links by relevance, but the site you're after may not come up first. A given search may produce thousands or millions of results!

You can go back to www.google.com at any time to perform a new search.

SUMMARY

Congratulations, you've taken your first steps into a larger world! The web has literally billions of web pages to explore, and you now have the basic tools to do that. Here's a summary what you've learned in today's workshop:

Time: 10 minutes.

RECAP

- What the internet is and how to connect to it
- The difference between a dial-up and broadband connection
- How to search the web for topics of interest
- How to navigate the web using the Address bar, Search bar, hyperlinks, and your browser's Back and Forward arrows.

ADDITIONAL WORKSHOPS

If you really want to know how to get the best of the internet, we have further Tech Savvy Seniors sessions as well. When you complete the Beginners course, you should be able to:

- Use bookmarks, tabs, home pages and other browser features
- Know how to stay safe online
- Know how to compose and send emails
- Do all your banking and shopping online
- Share photos and stay in contact with loved ones
- Use smartphones and tablets to make calls and access the internet.

USEFUL WEBSITES

If you're looking for further guidance right now, you can fire up a web browser and try these addresses:

For more information on different types of broadband plans and internet connections

www.telstra.com.au/broadband



For 'know how' video demonstrations

www.youtube.com/telstra

A great site for internet beginners

www.bbc.co.uk/webwise/

GLOSSARY

Term: BROADBAND. Explanation: A fast, always-on internet connection.

Term: BROWSER. Explanation: A program used for viewing web pages. Edge, Internet Explorer, Safari, Chrome and Firefox are examples of browsers.

Term: DIAL-UP. Explanation: A type of internet connection in which a modem dials a phone number to connect to the internet.

Term: DOMAIN NAME, ADDRESS OR URL. Explanation: A web page's unique code that allows you to find it among the billions of other web pages on the internet.

Term: DOWNLOAD. Explanation: To transfer information (data) from the internet to your computer.

Term: INTERNET. Explanation: A worldwide network that allows computers to exchange information with each other.

Term: INTERNET SERVICE PROVIDER (ISP). A company that provides access to the internet.

Term: KILOBITS PER SECOND (Kbps), MEGABITS PER SECOND (Mbps). Explanation: A way of measuring how much data an internet connection transfers every second. 1Mbps = 1024Kbps.

Term: KILOBYTE (KB), MEGABYTE (MB), GIGABYTE (GB). Explanation: A way to measure an amount of data transferred or stored (the same as your computer's hard disk or memory). 1GB = 1024MB = 1048576KB

Term: LINK (OR HYPERLINK). Explanation: A shortcut that connects one web page to another.

Term: MODEM. Explanation: A piece of equipment that allows computers to connect to the internet and exchange information with each other.

Term: ONLINE. Explanation: Connected to the internet.

Term: WEB PAGE. Explanation: A document on the internet.

Term: WEBSITE. Explanation: A collection of web pages about the same subject that are published by the same person or organisation.



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