Digital Literacy Essentials

LEARNER GUIDE

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Contents

Welcome to Digital Literacy Essentials

This session is an introduction to Digital Literacy and will cover hardware, software, mobile equipment, apps and how to seek information. Based on your needs, there is a lot of information available on the internet, which can be accessed through search engines such as Google and video sites such as YouTube. Using sites such as these can allow you to search for information by putting your question into the search bar. This is one of the simplest ways to use the internet, and something that is encouraged throughout the session to help you find additional information on sections that interest you.

- Hardware and software and their uses at home and work

- Different types of applications software

- How to use workplace applications

- Where to find out more on how to improve your digital skills

What is Digital Literacy Essentials?

VIDEO

Digital literacy and why it matters – watch this video:

[Digital literacy and why it matters](https://www.youtube.com/embed/p2k3C-iB88w?rel=0&wmode=opaque)[1]

SELF-CHECK - WHAT IS DIGITAL LITERACY?

Select the correct answers to what digital literacy means.

☐   Communication

☐   Collaboration

☐   Expression of ideas

☐   Staying in touch with friends or family

☐   Using work-based programs

☐   Using mobile apps

☐   Processing complaints

☐   Using digital literacy for study

☐   Improving career opportunities

Check your answers at the end of this Learner Guide.

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[1] https://www.youtube.com/embed/p2k3C-iB88w?rel=0&wmode=opaque

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Hardware

What is hardware?

Everything you do on a computer/digital device requires both hardware and software. Different types of hardware need different sorts of software to perform different functions in our personal and work lives.

What are the different types of computers?

Other equipment that can plug into your computer (usually a USB port) include; microphones, speakers, webcams, cameras and scanners. These also fall under the umbrella of hardware.


Laptops: are a more portable, all-in-one computer that can go almost anywhere. Like a desktop, they include many similar equipment components.

Desktop computers: are designed to sit on your desk and include different components.

Tablets: are even more portable than a laptop, they are also smaller and lighter. Instead of a keyboard and mouse, they have a touchscreen for typing and navigation. They can carry out most everyday functions at home or at work and are powerful enough to run common programs like Microsoft Office 365, Dropbox, Google Drive and OneDrive.
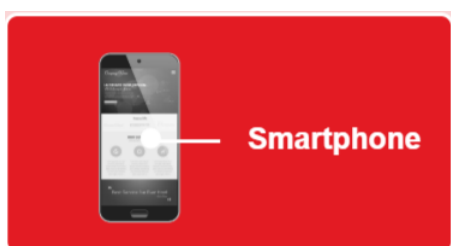
Smartphone: The term 'smartphone' is used frequently these days but what is it that makes them 'smart'?

Mobile phones and smartphones are not the same things. They share the same basic functions like making and receiving calls and texts, but that's where the similarities end.

Smartphones

Your smartphone is essentially a computer in your pocket, with operating systems and applications that require constant software updates.

Smartphones include functionality such as:

- Touchscreen technology
- Internet connectivity
- Wi-Fi
- Bluetooth
- Digital camera
- GPS navigation
- Video
- Email

Wearables

In addition to desktops, laptops, tablets and smartphones, there are other types of computers used every day at home and work.

Wearables are devices that we 'wear' that are connected wirelessly to the internet. They use data to give us results based on why we are using them. Fitbit, SmartCap, Google Glasses are all examples of wearable technology.

Wearables – such as fitness trackers, smart phones, smart caps.
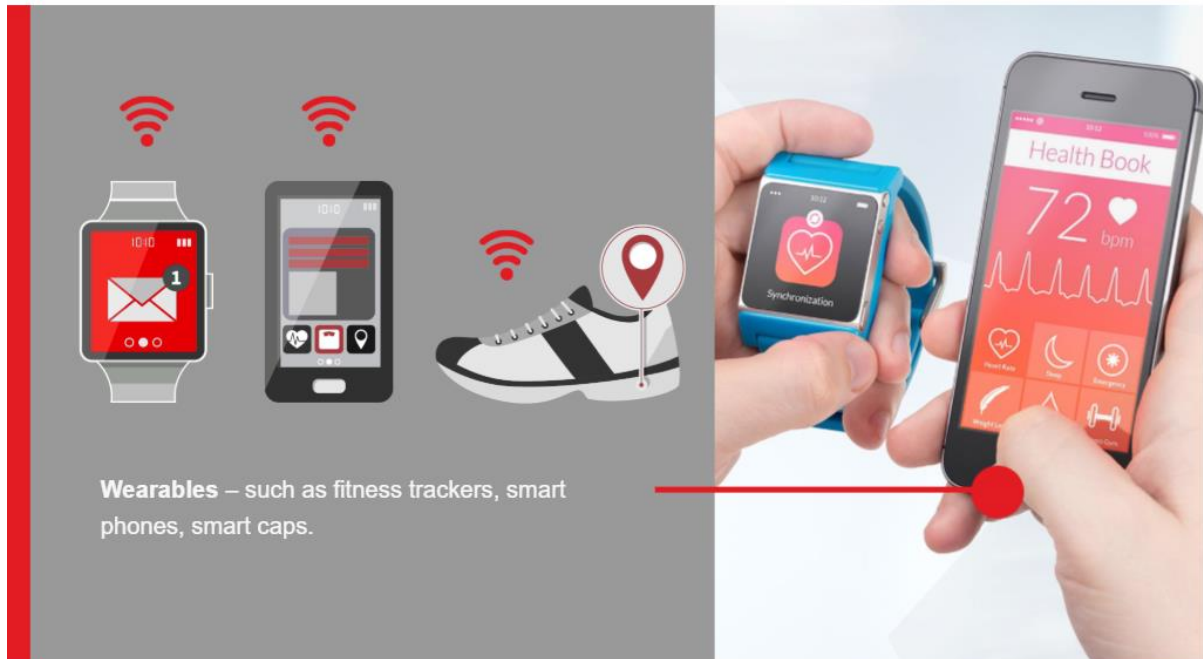
Smart Devices

A smart device is an electronic device, generally connected to other devices or networks via different wireless protocols such as Bluetooth or Wi-Fi, which can operate to some extent interactively and autonomously.

Most cars today also have computers and operating systems to assist with diagnostics and performance. Cars now include a variety of computer systems.
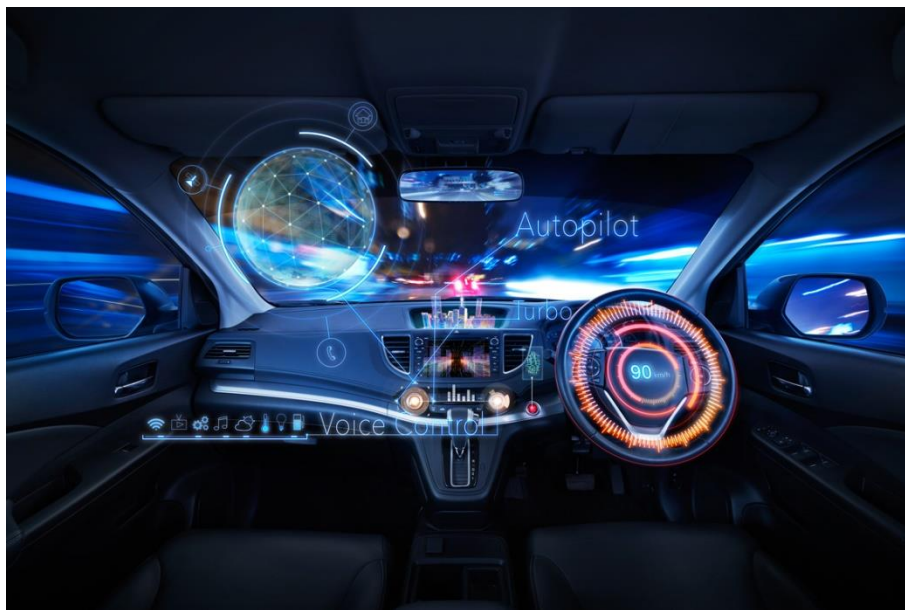
An IoT smart home with AI by Qualcomm Technologies

Internet of Things (IoT)

Simply put, this is the concept of basically connecting any device with an on and off switch to the Internet (and/or to each other). This includes everything from cellphones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything else you can think of. This also applies to components of machines, for example a jet engine of an airplane or the drill of an oil rig.

Source: https://www.forbes.com/sites/jacobmorgan/2014/05/13/simple-explanation-internet-things-that-anyone-can-understand/#64e3f9a81d09

Artificial Intelligence (AI)

Today, modern dictionary definitions focus on AI being a sub-field of computer science and how machines can imitate human intelligence (being human-like rather than becoming human). The English Oxford Living Dictionary[2] gives this definition: "The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages." Examples include spam filters on email, security surveillance, Google Maps and chatbots.

Source: https://www.forbes.com/sites/bernardmarr/2018/02/14/the-key-definitions-of-artificial-intelligence-ai-that-explain-its-importance/#6ae759104f5d

> ## VIDEO
>
> An IoT smart home with AI, powered by Qualcomm Technologies – watch this video:
>
> An IoT smart home with AI, powered by Qualcomm Technologies[3]

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[2] https://en.oxforddictionaries.com/definition/artificial_intelligence
[3] https://www.youtube.com/embed/KawsGh9bZgQ?rel=0&wmode=opaque

Activity: Smart devices

SELF-CHECK - SMART DEVICES

In addition to the smart phone, what are some smart devices that have become an everyday part of our home and work life?

Please complete the question(s) below.

	Yes	No
Fridge	☐	☐
Television	☐	☐
Air conditioner	☐	☐
Washing machine	☐	☐
Garage door openers	☐	☐
Analogue wall clock	☐	☐
Light bulbs	☐	☐
Security Cameras	☐	☐
Hair dryer	☐	☐

Check your answers at the end of this Learner Guide.

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Software and Applications
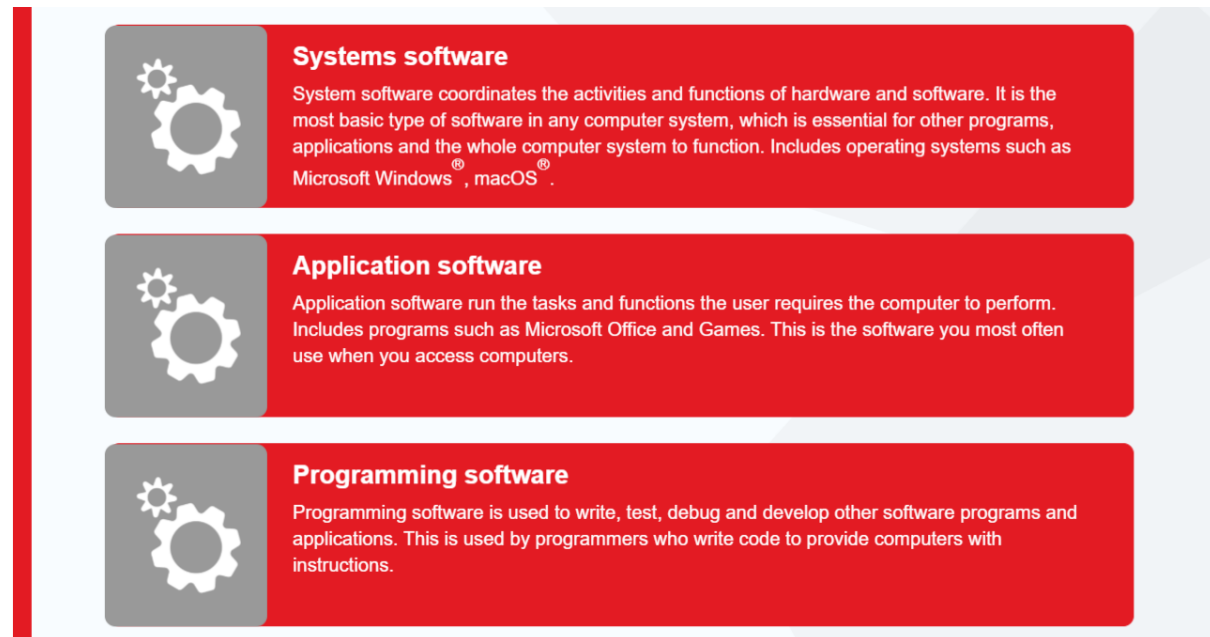
What is software?

Software are the programs and other operating information used by a computer.

Computer software, or simply software, is a collection of data or computer instructions that tell the computer how to work. This is in contrast to physical hardware, from which the system is built and actually performs the work.
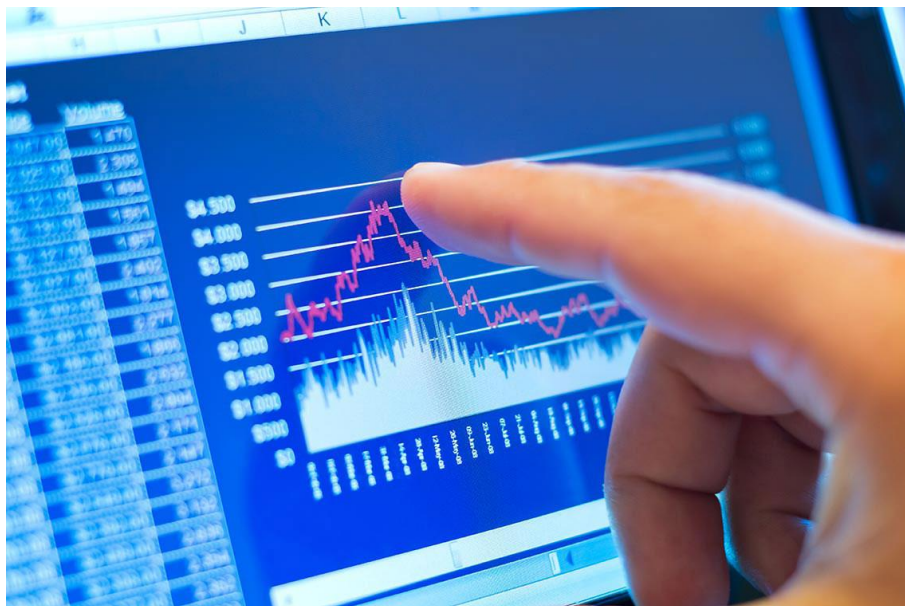
Types of software

There are three broad categories of software

Systems software

System software coordinates the activities and functions of hardware and software. It is the most basic type of software in any computer system, which is essential for other programs, applications and the whole computer system to function. Includes operating systems such as Microsoft Windows®, macOS®.

Application software

Application software run the tasks and functions the user requires the computer to perform. Includes programs such as Microsoft Office and Games. This is the software you most often use when you access computers.

Programming software

Programming software is used to write, test, debug and develop other software programs and applications. This is used by programmers who write code to provide computers with instructions.

What is an operating system?

VIDEO

What is an operating system? – watch this video:

[Computer Basics: Understanding Operating Systems](#)[4]

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[4] https://www.youtube.com/embed/pTdSs8kQqSA?rel=0&wmode=opaque

Operating Systems

Two of the most well-known operating systems are:

Most common operating system for both home and work use. Windows 10 now includes inbuilt virus protection, which improves security, as updates can be initiated by Microsoft to PC's in real time.

PROS

- Lots of software and support available
- Plenty of features for basic and advanced users
- Hardware is more affordable

CONS

- Hardware is much more expensive
- Only runs on Apple products

PROS

- Less susceptible to security breaches
- Less software and hardware errors
- Regular software updates and improvements make them more capable over time

CONS

- Hardware is much more expensive
- Only runs on Apple products

Worldwide OS Market Share

CASE STUDY

Let's look at the market share between Windows and Mac. Here we can see the break down of Windows users by which version they are using. This illustrates that there is very little diversity in the market and that most workplaces run Windows. If you have a PC it is likely you're using Windows, if you have a Mac you'll be using the Apple operating system (OS). Linux is more often used by experienced programmers or users.

Worldwide OS Market Share
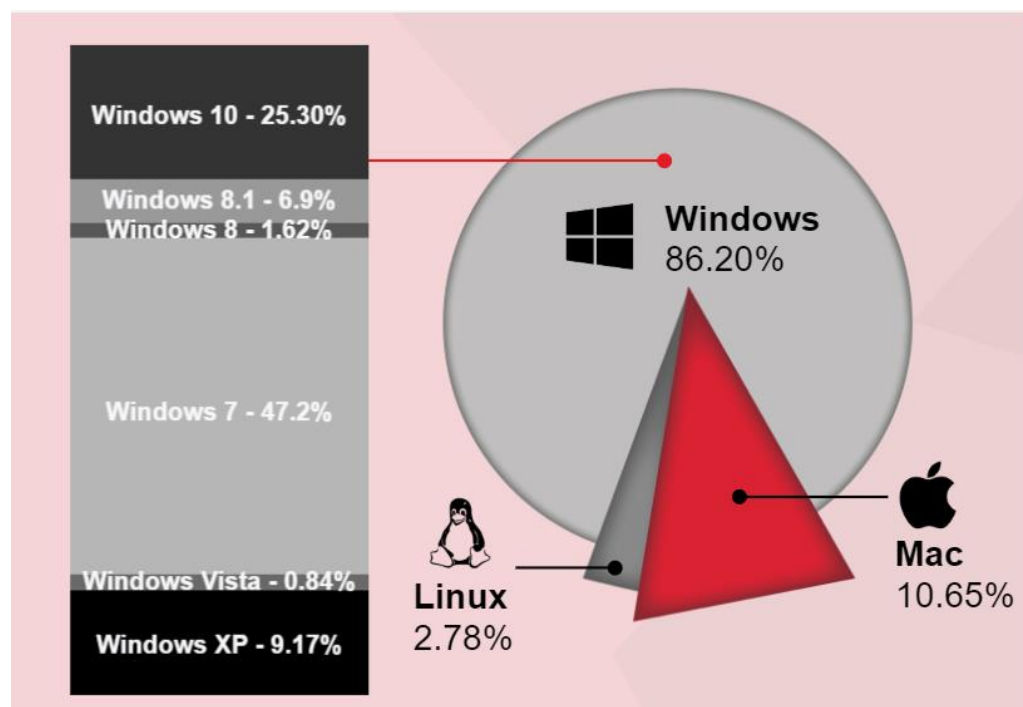
Examples of application software

Application software run the tasks and functions the user requires the computer to perform. Application software is what we typically think of when we hear the word 'software'.
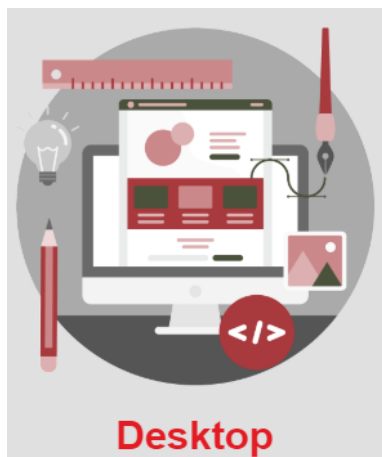
Desktop applications are often confined to a physical location and are usually installed directly on computers or laptops. Popular applications include Microsoft Word, Microsoft Excel and Microsoft Outlook.

These applications often have consistent features, such as a toolbar at the top of the page. The toolbar allows you to enter information, format information and save your information. Learning by using these applications and looking up additional information on the internet can be a great way to improve your skills

Web applications run on multiple hardware and operating systems. They have the same functionality as the desktop versions however have a broader reach because they are not installed on a hard drive so can be easily accessed from anywhere an internet connection is available, e.g. cloud-based applications.

Web applications can give businesses the ability to increase efficiency (all users access the same version at all times from any location). Popular web applications include: Gmail, Google Docs, Yahoo, Twitter and Office 365.

What is the cloud? Essentially the cloud is the internet.

Cloud-based is a term that refers to digital data stored, managed, and processed on a network of remote servers hosted on their Internet, rather than on your local servers or personal computers. It can utilise a combination of desktop and web-based applications.

If you have a smartphone, you may be familiar with the terms Apple iCloud, OneDrive and Google Drive. These are cloud-based storage applications that enable us to store and access our information from multiple devices.
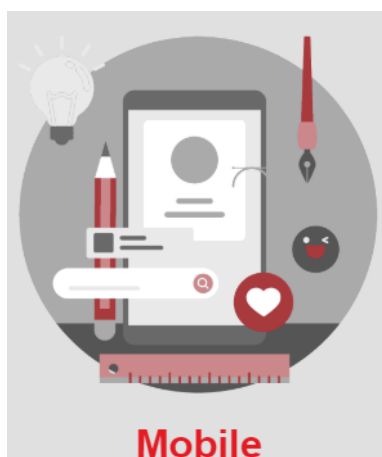
Most commonly referred to as an 'app', this type of software is designed to run on a mobile device. Most mobile apps provide specific functions.

Apps are commonly downloaded from a central hub on the mobile itself.

Top Apps of 2018

What's App, Facebook, Facebook Messenger, Instagram, Snapchat, Uber, YouTube, Netflix, Twitter, Gmail, Google Maps.

Complete the activity below in order to identify the difference between hardware and software.
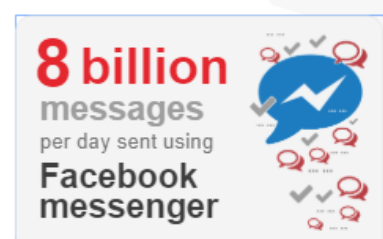
SELF-CHECK – HARDWARE OR SOFTWARE

Identify each of the following as hardware or software

	Hardware / Software
Microsoft	
Laptop	
Desktop Publishing	
Tablet	
Financial	
Adobe	
Travel maps	
Computer	
Mobile Phone	

Check your answers at the end of this Learner Guide.

Mobile fun facts

Mobile technology and the use of mobile apps is fast becoming a permanent fixture in workplaces across all industries. Mobile applications enable users to collect and view information and data, KPI's on smartphones and tablets in real time.

Everyday users watch over **1 billion** hours of video on YouTube

Facebook Monthly active users (Worldwide) **2.32 billion**

3.2 billion likes per day on Instagram

2,083,333 snaps are sent every minute on snapchat

80% of the 500 million tweets per day are on a mobile phone

8 billion messages per day sent using Facebook messenger
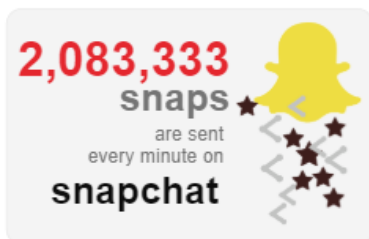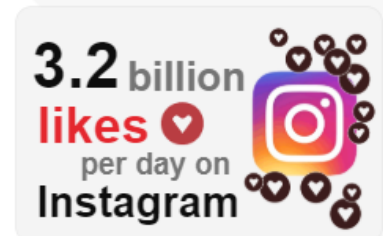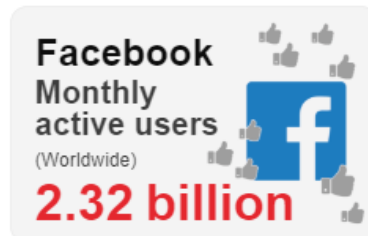
How to install an app to your smart phone

The word "app" is short for "application". Applications (or programs, as they're better known on computers) are created by programmers to fulfill specific tasks. In order to use apps, you have to install and store them on the devices you use, though many apps are installed on your phone before you buy it.

The market is full of mobile applications, you can get them from the mobile apps store.

As long as you're logged in with the same Google account you use for your mobile phone or tablet, you can click the install button on the website to remotely install the app on your phone or tablet.

You can also download apps onto your mobile device in other ways. For example, you can connect your phone to your computer to upload the application to your mobile device and install.
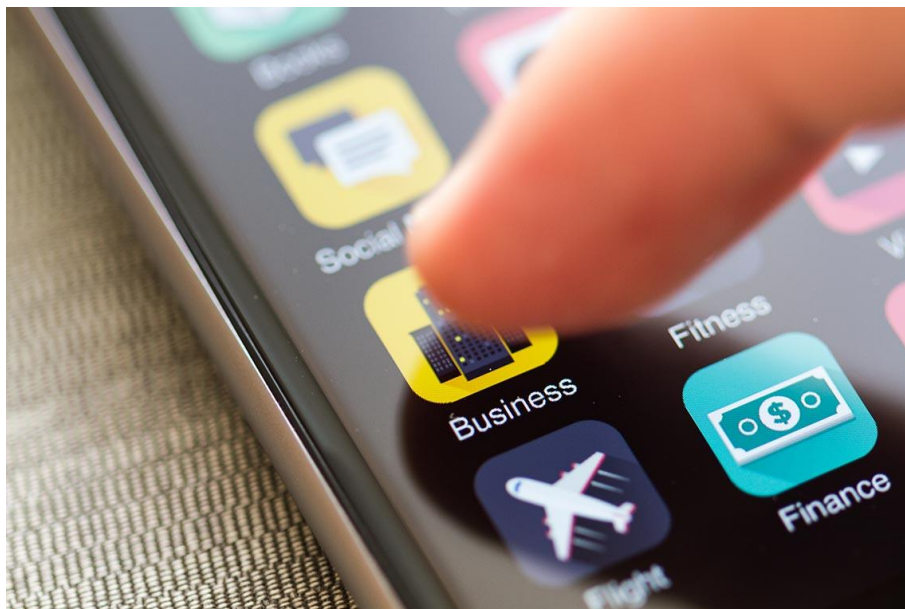
ACTIVITY

Install an app on your device.

- Identify the app to be installed.

- Search for the app on your mobile phone and follow along with the instructions on the screen, completing each action on your mobile device as you go.

You may refer to the 'Installing an App' instructions below:

Installing App on an **Apple** device
Installing an App on an Apple device (instructions sourced from *wikiHow*)

1. Open the app store by tapping on the iTunes app store icon. The iTunes Store app icon resembles a white "A" with a blue background and is call App Store. All apps for apple devices are located in the iTunes store

2. The quickest way to find the app you wish to install is to use the search function. The search function located on the bottom right of your screen and looks like a magnifying glass. Tap the magnifying glass.

3. Tap the search bar. The search bar is a grey text field with "App Store" written in it. Once you tap it, the keyboard will appear.

4. Type in the name of the app you would like to download and tap the icon once you have found it

5. Once you have tapped the icon, a window with the app details will appear on your screen. Tap "Get" (for Free apps), or "the price" button which is located to the right of the app name (at the top of the screen).

6. When prompted, enter your Apple ID password. This will download the app to your device

7. Once downloaded, you can open the app. You can do this directly from within the store by tapping "Open" or by navigating to your home screen and tapping the app icon.

Installing App on an **Android** device
Installing an App on an Android device (instructions sourced from *wikiHow*)

1. Open the app store by tapping on the Google Play Store icon . The Google Play Store app icon resembles a white briefcase with a coloured triangle on it and is called Play Store. It is recommended that all apps for android devices be sourced from the Play Store

2. The quickest way to find the app you wish to install is to use the search function. The search function located on the upper right of your screen near the time and looks like a magnifying glass. Tap the magnifying glass and a keyboard will appear.

3. Type in the name of the app you would like to download and press the magnifying glass on your keyboard. It will be located on the bottom right of your keyboard.

4. Once you have found the app, tap the icon to bring up a window that will outline the application description, screen shots and reviews

5. Press the "Install" button to install the app.

6. Press the "Accept" button if you trust the application. This may take some time.

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Workplace Applications

Productivity Applications

Productivity software is an application used by people to "produce" information. Productivity applications help you create documents, databases, graphs, worksheets and presentations.

Popular productivity applications include Microsoft Word and Microsoft Excel. There are other productivity applications which are becoming more prevalent including Google Docs and Gmail which are now available in a suite called 'Google Apps for Business'.

Source: https://www.pcmag.com/encyclopedia/term/49780/productivity-software

Microsoft Office

There are several versions of Microsoft Office available; the latest version of Microsoft Office is called Office 365 which is cloud based. Many organisations still run 'desk-top' or 'server versions' of Microsoft Office such as Microsoft Office 2016, 2013 or 2010.

Microsoft Office is a useful productivity tool with applications which allow you to create, edit and collaborate on documents, spreadsheets or presentations.

Some applications that make up the Office suite include Microsoft Word, Excel, PowerPoint, OneNote, Outlook and OneDrive. Microsoft Office can be used on desktops, laptop computers and mobile devices. It can also be accessed using a web application or via the cloud dependant on the version.

Microsoft Word

Microsoft Word is used for creating, formatting and saving documents such as letters, resumes and reports. Microsoft Word comes complete with in-built tools to assist with proofing, editing and reviewing documents. Navigate to the below links and watch the training videos before completing the activity below. Your version of Microsoft Word may look different from the training videos, depending on the version you are using.

WEBLINK

For more tips and training visit the Microsoft Word help centre[5]

VIDEO

Video 1: Add and format text[6]

Video 2: Create a bulleted or numbered list[7]

Video 3: Change the line spacing in Word[8]

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[5] https://support.office.com/en-us/word
[6] https://support.office.com/en-us/article/add-and-format-text-2e76a31b-a6d6-4b4e-95c2-fb780e3ac8d3?wt.mc_id=fsn_word_format_text
[7] https://support.office.com/en-us/article/create-a-bulleted-or-numbered-list-9ff81241-58a8-4d88-8d8c-acab3006a23e?ui=en-US&rs=en-US&ad=US
[8] https://support.office.com/en-us/article/change-the-line-spacing-in-word-1970e24a-441c-473d-918f-c6805237fbf4?ui=en-US&rs=en-US&ad=US

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Activity: Microsoft Word

ACTIVITY

Following the steps below, create a document in Microsoft Word applying the principles learnt in the training videos you watched on the previous page:

- Open Microsoft Word – this may be located as a shortcut on you toolbar, desktop or found via your program list.

- Type the word 'Monthly Report' (press enter)

(the misspelling is deliberate for the purpose of this activity)

- Type the word 'Month' (press enter)

- Type 'Week 1' (press enter)

- Type 'Week 2'   (press enter)

- Type 'Week 3'   (press enter)

- Type 'Week 4'   (press enter)

- Select the text you just typed in steps four to five (Weeks 1 to Week 4)

- In the 'home toolbar' select the numbering to create a number list.

- Ensure the list is still selected.

- In the toolbar select 'line and paragraph spacing' and change to 2.0

- Select the text 'Monthly Report'

- In the 'home toolbar' make the following changes:

  – Change the font to Arial

  – Change the font size to 14

  – Format as bold

- Conduct a check on spelling/grammar

- Click the 'review toolbar'

- Click 'Spelling and Grammar'

- Update any errors by reviewing the results

- Select 'Change'

- Click 'File'

- Save As

- Save to a location such as 'My Documents'

Rename the File 'Monthly Report Template'.

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ACTIVITY EXAMPLE

A copy of the completed document is available below for your reference; there is no requirement to submit your completed document.

Monthly Report

Month

1. Week 1

2. Week 2

3. Week 3

4. Week 4

Microsoft Excel

Microsoft Excel is a spreadsheet application used to conduct calculations, organise and sort data, create charts and graphs and is also used for complex data management and analytics. Navigate to the below links and watch the training videos before completing the activity below. Your version of Excel may look a little different from the training videos, depending on the version you are using.
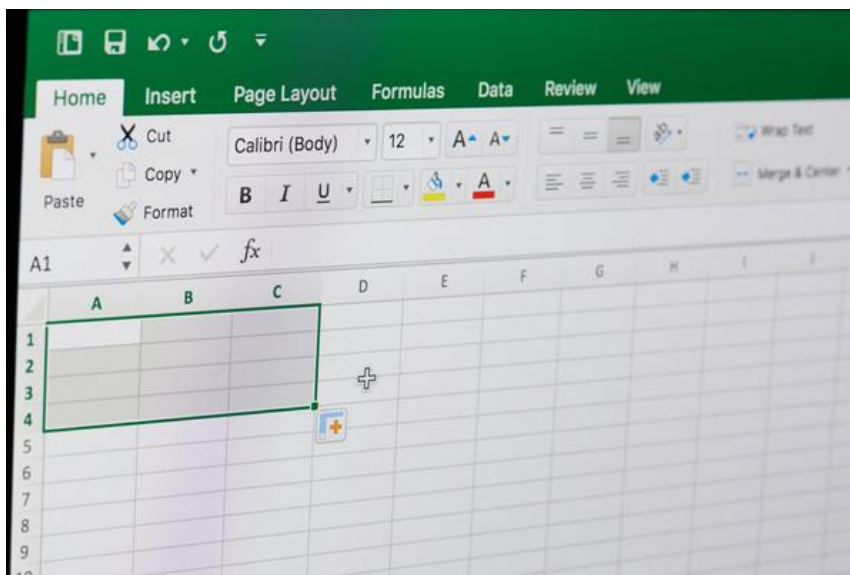
WEBLINK

For more tips and training visit the Microsoft Excel help centre.[9]

VIDEO

Video 1: Create a new workbook[10]

Video 2: Fill data automatically in worksheet cells[11]

Video 3: Available number formats in Excel[12]

Video 4: Overview of formulas in Excel[13]

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[9] https://support.office.com/en-us/excel
[10] https://support.office.com/en-us/article/create-a-new-workbook-ae99f19b-cecb-4aa0-92c8-7126d6212a83?wt.mc_id=otc_excel
[11] https://support.office.com/en-us/article/fill-data-automatically-in-worksheet-cells-74e31bdd-d993-45da-aa82-35a236c5b5db?ui=en-US&rs=en-US&ad=US
[12] https://support.office.com/en-us/article/available-number-formats-in-excel-0afe8f52-97db-41f1-b972-4b46e9f1e8d2?wt.mc_id=otc_excel

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Activity: Microsoft Excel

ACTIVITY

Following the steps below, create a worksheet in Microsoft Excel applying the principles learnt in the training videos you watched on the previous page:

- Open Microsoft Excel – this may be located as a shortcut on you toolbar, desktop or found via your program list.

- Open a new work book

- Rename your sheet by double clicking on the worksheet tile and type 'Monthly Targets'

- Type the word 'Monday' into **cell A2**

- Use the 'auto-fill' function by clicking on the bottom right hand corner of the cell and drag down to fill to Sunday (cell A8)

- Type the word 'Week 1' into **cell B1**

- Use the 'auto-fill' function by clicking on the bottom right hand corner of the cell and drag across to to Week 4 (cell E1)

- Set the daily targets for each day. Type the following targets and use the 'auto-fill' function by selecting **cells B2 to B8** and drag across to fill until you get to Week 4

Cell B2	Monday	500
Cell B3	Tuesday	250
Cell B4	Wednesday	300
Cell B5	Thursday	675
Cell B6	Friday	1300
Cell B7	Saturday	2000
Cell B8	Sunday	1600

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[13] https://support.office.com/en-us/article/overview-of-formulas-in-excel-ecfdc708-9162-49e8-b993-c311f47ca173?wt.mc_id=fsn_excel_formulas_and_functions

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- Select all cells with daily targets (B2 – B8, C2 – C8, D2 – D8, E2 – E8). Click in cell B2 and hover over all cells until highlighted in grey.

- In the toolbar you will see that the 'General' number format is applied. Click on the drop-down button and select **'Currency'**.

- Once currency is selected click on the '$' drop-down button to select **'$ English (Australia)'**

- Click in cell B9 and type **=SUM(**

- Select cells B2 to B8 and then type)

- Your complete formula should read **=SUM(B2:B8)**

- Press Enter

- Use the 'auto-fill' function to copy the formula clicking on the bottom right hand corner cell B9 and drag across to fill to Week 4 (cell E9)

- Select cells B9 to F9

- In your toolbar click the 'AutoSum' button

- F9 will display the following formula

- =SUM(B9:E9)

- Type the word 'TOTALS' into **cell A9**

- Click 'File'

- Save As

- Save to a location such as 'My Documents'

- Rename the File 'Monthly Sales Targets'

ACTIVITY EXAMPLE

A copy of the completed spreadsheet is available below for your reference; there is no requirement to submit your completed document.

	A	B	C	D	E	F
1		Week 1	Week 2	Week 3	Week 4	
2	Monday	500	500	500	500	
3	Tuesday	250	250	250	250	
4	Wednesda	300	300	300	300	
5	Thursday	675	675	675	675	
6	Friday	1300	1300	1300	1300	
7	Saturday	2000	2000	2000	2000	
8	Sunday	1600	1600	1600	1600	
9	TOTALS	6625	6625	6625	6625	26500
10						

Communication Applications

An essential part of good individual and company performance is effective communication and teamwork. Communication applications help you to share information and documents across locations and devices.

Communication applications such as Microsoft Outlook allow you to send and receive emails, store and manage contacts, create a task list and manage calendar/s. Other common communication applications include Lync, Skype and Google applications such as Gmail and Google Drive.

Summary

This session we have covered a variety of topics about hardware, software and applications. Some of the information you will have known, some of it may have been new to you. As technology changes rapidly it's important to look for opportunities to learn about what's happening in your workplace. You can do this through formal training, talking to colleagues, joining discussion forums or groups or asking questions about technology that you see in use, but may not use at the moment or by watching videos. Using the information this course has provided gives you the information you need to confidently navigate the digital transformation in your workplace.

Congratulations on finishing the Digital Literacy module!
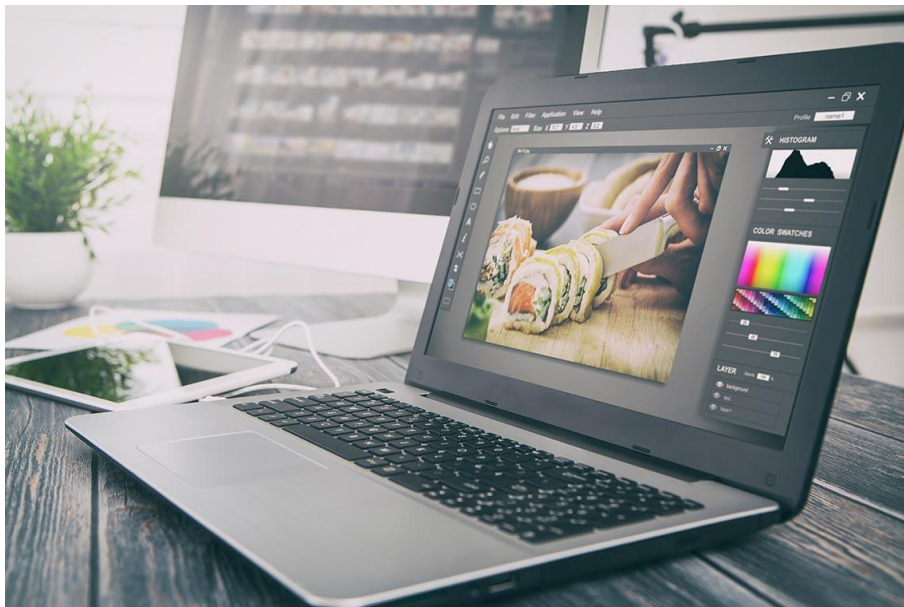
Self-check answers

SELF-CHECK - WHAT IS DIGITAL LITERACY?

Select the correct answers to what digital literacy means.

- ☑ Communication
- ☑ Collaboration
- ☐ Expression of ideas
- ☑ Staying in touch with friends or family
- ☑ Using work-based programs
- ☑ Using mobile apps
- ☐ Processing complaints
- ☑ Using digital literacy for study
- ☑ Improving career opportunities

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SELF-CHECK - SMART DEVICES

In addition to the smart phone, what are some smart devices that have become an everyday part of our home and work life?

Please complete the question(s) below.

	Yes	No
Fridge	☑	☐
Television	☑	☐
Air conditioner	☑	☐
Washing machine	☑	☐
Garage door openers	☑	☐
Analogue wall clock	☐	☑
Light bulbs	☑	☐
Security Cameras	☑	☐
Hair dryer	☐	☑

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SELF-CHECK – HARDWARE OR SOFTWARE

Identify each of the following as hardware or software

	Hardware / Software
Microsoft	Software
Laptop	Hardware
Desktop Publishing	Software
Tablet	Hardware
Financial	Software
Adobe	Software
Travel maps	Software
Computer	Hardware
Mobile Phone	Hardware