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1 Introducing Windows 10

This chapter introduces Microsoft's latest operating system by describing its new features, explaining what editions are available, and exploring some free Microsoft downloads.

12 Windows releases
13 Windows 10 compatibility
14 New features in Windows 10
16 Editions of Windows 10
18 Microsoft OneDrive
20 Windows 10 connectivity
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Windows releases

There have been many versions of Microsoft Windows. The operating system was initially designed for IBM-compatible PCs, but was later extended to support larger computers such as servers and workstations. A derivative version, Windows CE, was also developed for smaller devices such as PDAs and cell phones.

The main versions of Windows that have been released include:

Date	PC Versions	Server Versions
1985	Windows 1.0	
1987	Windows 2.0	
1990	Windows 3.0	
1993		Windows NT 3.1 Server
1995	Windows 95	
1996		Windows NT 4.0 Server
1998	Windows 98	
2000	Windows ME	Windows 2000 Server
2001	Windows XP	
2003		Windows Server 2003
2006	Windows Vista	Windows Server 2003 R2
2008		Windows Server 2008
2009	Windows 7	Windows Server 2008 R2
2012	Windows 8	Windows Server 2012
2013		Windows Server 2012 R2
2015	Windows 10	
2016		Windows Server 2016

The first three versions of Windows listed above were designed for the 16-bit processor featured in the PCs of the day. Windows 95, 98 and ME added support for 32-bit processors. Windows NT was for 32-bit only, while XP and 2000 added 64-bit support. Windows Vista, Windows 7, Windows 8, Windows 10, and the newer server editions support both 32-bit or 64-bit processors. Each version of Windows builds on the functions and features included in the previous versions, so that the knowledge and experience you have gained will still be valuable, even though the appearance and the specifics of the operations may have changed.

Windows 10 receives regular updates from Microsoft. This book describes a "snapshot" of the operating system at the time of writing. Some features may change as Microsoft continues to develop and improve the operating system.

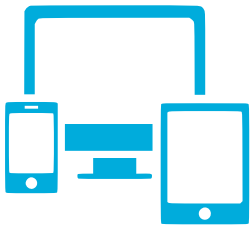
The original IBM PC was supported by **PC-DOS** and **MS-DOS** operating systems, developed for IBM-compatible PCs.

Windows 10 for PCs and larger tablets comes in four main editions:

- **Home**
- **Pro**
- **Enterprise**
- **Education**

Windows 10 compatibility

With Windows 10, Microsoft has created an operating system designed to be compatible with a range of different devices. To make this possible, Windows 10 has a new feature called "Continuum" that helps the operating system work better with devices that support both a mouse and keyboard, and touch input – for example: Microsoft's Surface tablet or Lenovo's Yoga laptops. Continuum offers two operating modes for each type of device:



Tablet mode

When a device is in Tablet mode, the layout of the operating system is appropriate for touchscreen input. This means that the Start screen has tiles that you can tap to launch apps, the apps appear full-screen, and you can navigate using touch gestures. When you connect a mouse and keyboard, or flip your laptop around, you are prompted to change into Desktop mode.

Desktop mode

When a device is in Desktop mode, the layout of the operating system is appropriate for mouse and keyboard input. This means that the Start menu has an A-Z list that you can click to launch apps, the apps appear in windows, and you can navigate using the mouse buttons or keyboard shortcuts. When you disconnect a mouse and keyboard, or flip your laptop around, you are prompted to change into Tablet mode.

Tablet mode is less demanding of system resources, and its introduction in Windows 10 clearly indicates that Microsoft recognizes the importance of mobile devices for the future.

Windows 10 shares its styling and kernel code with many platforms including desktop PCs, laptops, tablets, and even the Xbox games console. This move towards cross-compatibility is one that is intended to establish Microsoft on multiple devices.

A key element in this is the OneDrive app, which is described in detail later. OneDrive enables users to store all their data and apps online, and synchronize that data across all their devices. As a result, they will be able to log in to OneDrive on any Windows 10 device and immediately access their documents, pictures, media, and preference settings. Whatever or whoever's device they are using, it will be as though they are using their own.

The New icon pictured above indicates a new or enhanced feature introduced in Windows 10. For example, the **Continuum** feature is new in Windows 10.

OneDrive is the original "SkyDrive" facility. It was renamed for copyright reasons. Its features and functions remain unchanged.

New features in Windows 10

Each new version of Windows adds new features and facilities. In Windows 10, these include:

Familiar and improved

Windows 10 provides free semi-annual **feature updates** that download automatically to add new features as they become available.

- **Customizable Start menu** – a welcome return after the controversial removal of the Start menu in Windows 8.
- **Windows Defender & Windows Firewall** – integral anti-virus defense against malware and spyware.
- **Fast Startup** – rapid system startup and ready to instantly resume from Sleep mode.
- **Task View** – enhanced with Timeline to quickly resume activities you were working on in the past.
- **Battery Saver** – limits background activity to make the most of your battery.
- **Windows Update** – automatically helps keep your device safer and running smoothly.
- **Bluetooth** – automatically detects nearby devices that can be easily paired for file sharing.

The customizable **Start menu** is a new and welcome feature in Windows 10.

Cortana Personal Digital Assistant

Cortana is a new feature in Windows 10 and requires you to have a Microsoft account. Performance may vary by region and device.

- **Talk or type naturally** – lets you ask for assistance by typing into a text box or by speaking into a microphone.
- **Personal proactive suggestions** – provides intelligent recommendations based upon your personal information.
- **Reminders** – prompts you according to the time of day, your location, or the person you are in contact with.
- **Search the web, your device, and the Cloud** – find help, apps, files, settings, or anything, anywhere.
- **"Hey Cortana" hands-free activation** – passive voice activation recognizes your voice.

Windows Hello

- **Native fingerprint recognition** – the ability to log in to the operating system using a fingerprint reader.
- **Native facial and iris recognition** – the ability to log in to the operating system using a camera.
- **Enterprise level security** – the ability to log in to the operating system using a 4-digit PIN code or picture.

Windows Hello is new in Windows 10. Facial recognition requires a camera that has RGB, infrared, and 3D lenses.

Multi-doing

- **Virtual desktops** – multiple desktops to separate related tasks into their own workspaces.
- **Snap Assist** – easily position up to four apps on the screen.
- **Snap Across** – easily position apps across different monitors.

Continuum

- **Tablet mode** – an interface appropriate for touch input and navigation using gestures.
- **Desktop mode** – an interface appropriate for mouse and keyboard input, and navigation clicks and shortcuts.

Virtual desktops and **Continuum** are both new features in Windows 10.

Microsoft Edge

- **Web browser** – streamlined for compliance with the latest HTML5 web standards.
- **Reading view** – instantly remove formatting distractions from web pages to make reading easier.
- **Built-in ink support** – add Web Notes to existing web pages then save or share the edited page.
- **Cortana integration** – search the device, web, and Cloud to quickly find what you need.

Microsoft Edge is new in Windows 10. It lets you write **Web Notes** with a digital pen, with your mouse, or with your finger on touchscreen devices.

Editions of Windows 10

There are four main editions of Windows 10 for PCs and tablets:

Windows 10 Home edition

This is the consumer-focused desktop version that includes a broad range of Universal Windows Apps such as Photos, Maps, Mail, Calendar, and Groove Music.

Windows 10 Pro edition

This is the desktop version for small businesses.

Windows 10 Enterprise edition

This is the desktop version for large organizations.

Windows 10 Education edition

This builds on the Enterprise edition to meet the needs of schools.

The following tables list the features in Windows 10 and illustrate that some of the features are specific to certain editions:

There is also a **Windows 10 Pro for Workstations** edition for intensive computing on high-end hardware.

Features	Home	Pro	Enterprise	Education
Customizable Start menu	Y	Y	Y	Y
Defender & Firewall	Y	Y	Y	Y
Fast start & InstantGo	Y	Y	Y	Y
TPM support	Y	Y	Y	Y
Battery Saver	Y	Y	Y	Y
Windows Update	Y	Y	Y	Y
Cortana Digital Assistant	Y	Y	Y	Y
Windows Hello login	Y	Y	Y	Y
Virtual desktops	Y	Y	Y	Y
Snap Assist	Y	Y	Y	Y
Tablet & Desktop modes	Y	Y	Y	Y
Microsoft Edge	Y	Y	Y	Y
Device Encryption	Y	Y	Y	Y
Domain Join	-	Y	Y	Y
Group Policy Manager	-	Y	Y	Y
BitLocker	-	Y	Y	Y
Enterprise Mode IE	-	Y	Y	Y
Assigned Access 8.1	-	Y	Y	Y
Remote Desktop	-	Y	Y	Y

Features	Home	Pro	Enterprise	Education
Client Hyper-V	-	Y	Y	Y
Direct Access	-	Y	Y	Y
Windows To Go Creator	-	-	Y	Y
AppLocker	-	-	Y	Y
Branch Cache	-	-	Y	Y
Start Screen Group Policy	-	-	Y	Y
Side-load Business Apps	Y	Y	Y	Y
Mobile Device Manager	Y	Y	Y	Y
Azure Active Directory	-	Y	Y	Y
Business Store	-	Y	Y	Y
Granular UX Control	-	-	Y	Y
Easy Upgrade (Pro to Enterprise)	-	Y	Y	-
Easy Upgrade (Home to Education)	Y	-	-	Y
Microsoft Passport	Y	Y	Y	Y
Enterprise Data Protection	-	Y	Y	Y
Credential Guard	-	-	Y	Y
Device Guard	-	-	Y	Y
Update for Business	-	Y	Y	Y
Current Branch - Business	-	Y	Y	Y
Long Term Service Branch	-	-	Y	-

There are also three special editions of Windows 10:

Windows 10 S edition

This is a feature-limited version designed primarily for low-end devices in education.

Windows 10 IoT edition

This is an embedded version for use in small low-cost devices intended for data management.

Windows 10 Team

This is a version for the Surface Hub interactive whiteboard.

Windows 10 brings **Xbox gaming** to the PC and is available in 111 languages!

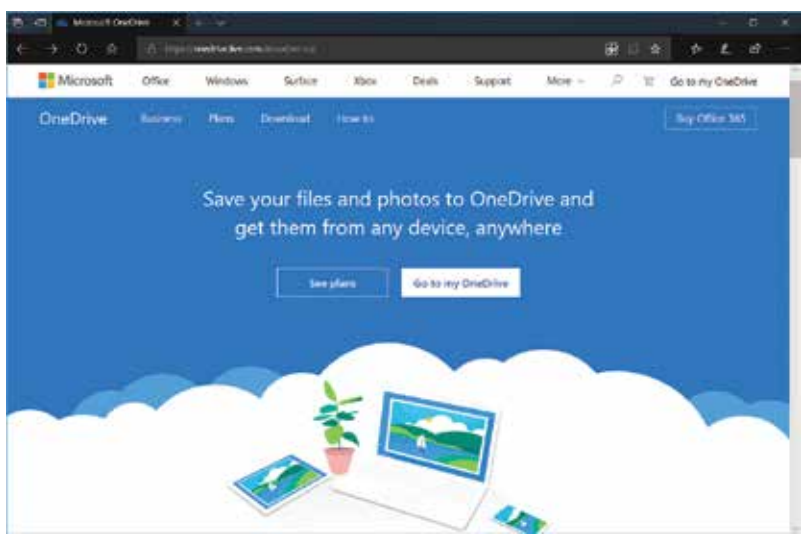
Microsoft OneDrive

A very important function built in to Windows 10 is its ability to utilize what is commonly known as "The Cloud". Essentially, cloud computing is a technology that uses the internet and centralized remote servers to maintain data and applications. It allows consumers and businesses to use applications they don't own, and to access their personal files on any computer that has internet access. The technology enables much more efficient computing by centralizing data storage, processing and bandwidth.

So how do you get into the Cloud? There are actually several ways: One is to open an account with a dedicated service such as Dropbox. You will be given a free amount of storage space; 2GB initially (which can be increased by referring friends), in which you can store virtually anything you choose to. If you need more, you will be charged a fee depending on the amount required.

A second way is to buy a product from a major software manufacturer. A typical example is Acronis True Image – a data backup program that provides huge online storage, which enables you to create Cloud-based backups.

A third way is courtesy of Microsoft OneDrive, which can be accessed online. OneDrive is basically a portal that allows you to access 5GB of free online storage.



Dropbox

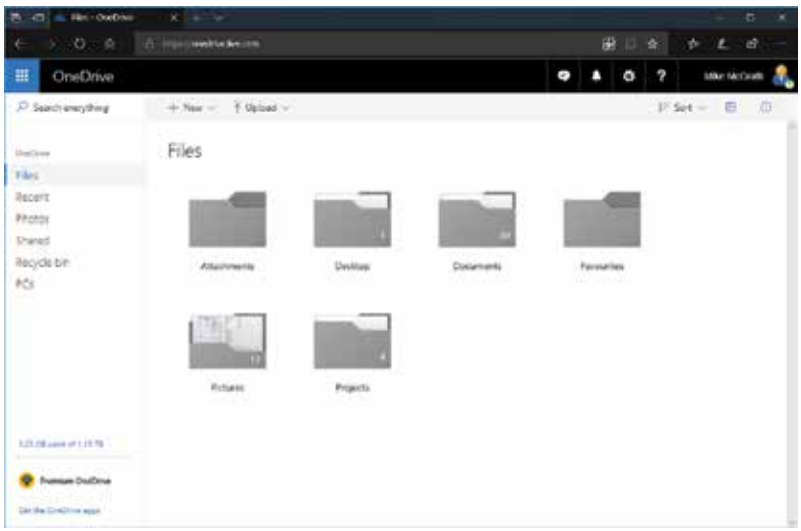
Discover more on **Dropbox** Cloud storage at **dropbox.com**

Acronis

Discover more on **True Image** at **acronis.com**

OneDrive

You need a Microsoft account to sign in to **OneDrive**. By default, you get 5GB of free OneDrive storage space with Windows10. Find up-to-date information on plan allowances and pricing at **https://onedrive.live.com/about/en-us/plans**



You can log in to access OneDrive with any web browser. Simply visit **onedrive.live.com**

Once logged in, you will see that OneDrive has started you off with a number of pre-configured folders. Windows 10 is supplied configured to automatically synchronize these folders on OneDrive. You can delete these folders, rename them, create more folders, nest folders within folders, and upload/download files.

Once uploaded, your data can be accessed from any smartphone, tablet or PC, from anywhere in the world and at any time. You can also access and upload data from within programs in the Microsoft Office suite of applications.

One of the coolest features of OneDrive is that it enables online sharing and collaboration. For example, you can share your holiday snaps with friends and family regardless of where they are, while business applications provide access to documents while on the move or sharing documents between offices.

A key aspect of OneDrive is that it enables data to be synchronized across a range of devices. For example, emails on your PC can be automatically loaded onto your smartphone or tablet, and vice versa. You can also synchronize various settings such as personalization of desktop background, theme, colors, passwords, app settings, and many more. This enables users to maintain the computing environment they are comfortable with across all their computing devices.

If you access OneDrive directly from a browser, you will have a "lite" version of **Microsoft Office** with which to create documents while online.

Windows 10 connectivity

Miracast is a Wireless Display (WiDi) technology your PC can use to project its screen onto any TV that supports Miracast.

Windows 10 is terrific at connecting all your devices – whether it's a 3-year-old printer or projecting to your brand new TV with Miracast. Windows 10 is built on a common core and includes Universal Windows Apps, so people using Windows 10 for both their PC and portable devices will get an optimal, seamless experience as they transition between devices throughout the day.

Microsoft recognizes that many people also use iPhone or Android devices but want to ensure their Windows 10 content remains available to them across all the devices they own, regardless of the operating system. So Microsoft has produced a number of apps for Android, iPhone and iPad devices to make them work well with a Windows 10 PC.

So, whatever the operating system, this means that all your files and content can be magically available on your PC and phone:

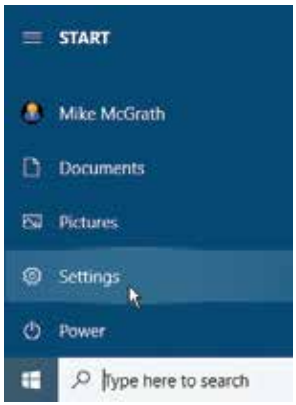
Cortana and **Groove Music** are new features in Windows 10.

- With the Cortana app on your phone you can have your Personal Digital Assistant always available.
- With the OneDrive app on your phone, every photo you take can automatically appear on your phone and Windows 10 PC.
- With the Groove Music app you can access and play your music from OneDrive on your phone or Windows 10 PC.
- With the OneNote app on your phone, any note you write on your Windows 10 PC can show up on your phone – and any note you write on your phone can show up on your PC.
- With the Skype app on your phone you can make video calls and messages – free over Wi-Fi.
- With Word, Excel, and PowerPoint apps on your phone you can work on Office documents without moving files around.
- With the Outlook app on your phone you can get your email messages and calendar reminders everywhere.

You must use the same **Microsoft account** on your PC, phone, and tablet to automatically synchronize your content across these devices.

To help people make everything work together, the Windows 10 Settings screen provides a feature that will help you link your Windows 10 PC to your Android, iPhone or iPad device.

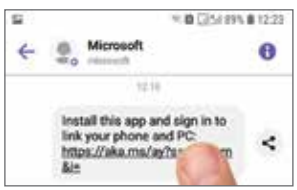
1. Click the **Start** button, then choose the **Settings** item



2. Next, click **Phone**, **Add a phone, Link phone** to open the "Microsoft account" dialog

3. Enter your phone number in the dialog, then click the button to **Send** button a message to your phone

4. The received message contains a link to install the **Your Phone Companion** app – tap the link and install the app

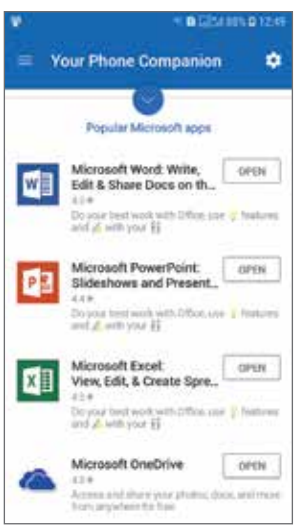


5. Grant permissions to allow the **Your Phone Companion** app access to your phone's file system

6. Your PC now recognizes your phone as a linked device on the **Settings**, **Phone** screen

7. Your phone is now linked to your PC and provides an option to install popular Microsoft apps onto your phone. A **Your Phone** item is added to the Start menu so you can access text messages and photos on your phone from your PC

You can find the Your Phone Companion app on **Google Play** store.



Microsoft Office Online

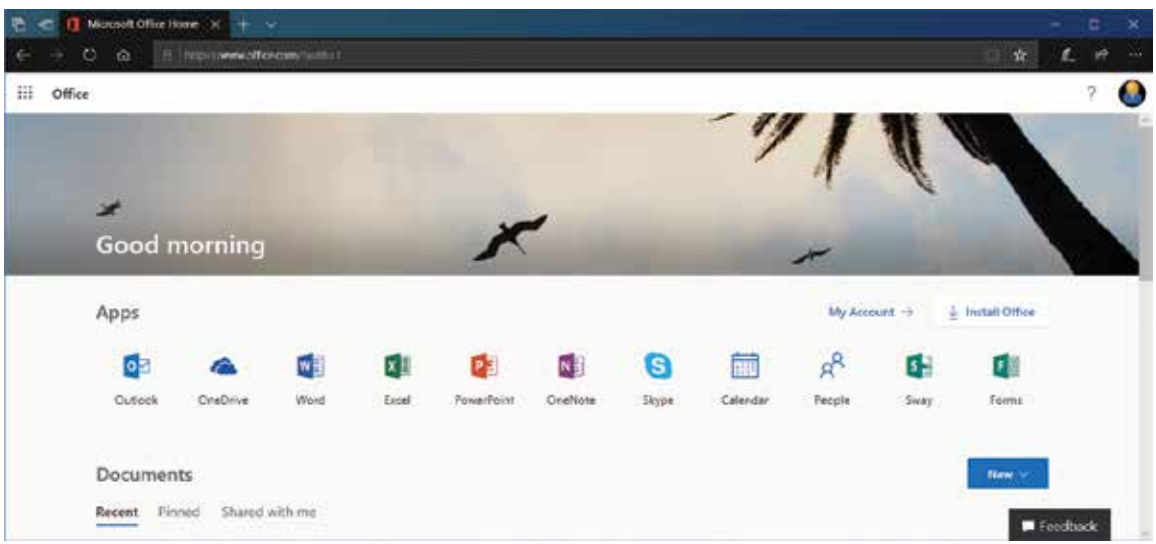
Microsoft Office is a very important application for many people, so here we will take a brief look at Microsoft Office Online and see how it fits in with Windows 10.

Office Online includes the core apps: Word, Excel, PowerPoint, Outlook, and OneNote for both PC and touchscreen. Your completed documents, spreadsheets, and presentations can be saved online in your OneDrive for easy access or sharing. Alternatively, they can be downloaded to your computer and saved as a local file – just as you would with an installed app.

You can compare versions of **Microsoft Office** online at products.office.com/en-us/compare-all-microsoft-office-products

1. Open the Microsoft Edge web browser, then navigate to the **office.com** website

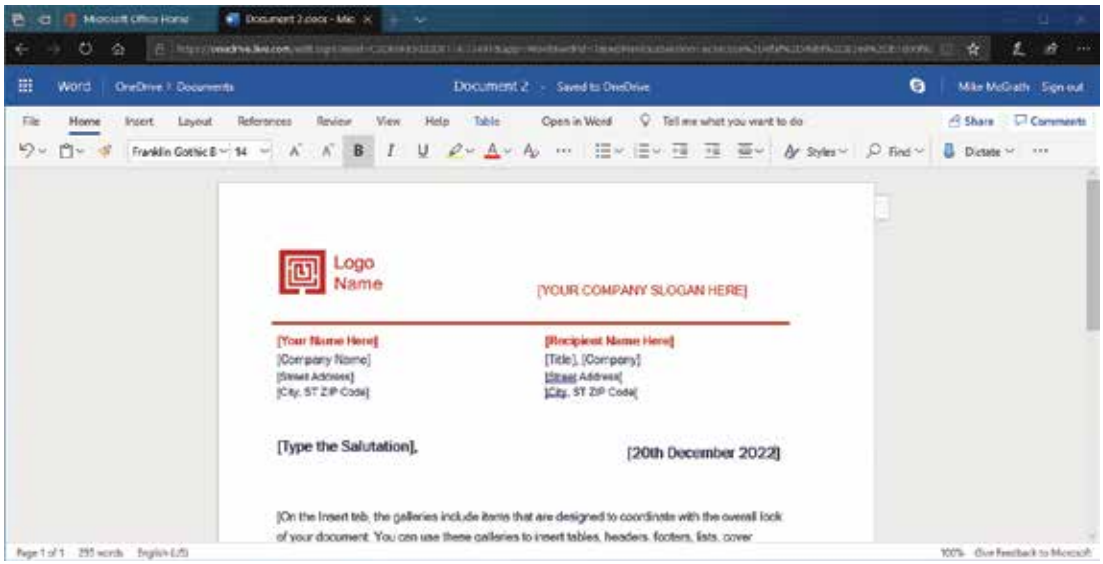
2. Click the **Sign in** button then type the email address and credentials for your Microsoft account



You will need a Microsoft account to sign in to **Office Online** apps.

3. Choose the online app you wish to use. For example, choose the **Word** app to create a cover letter

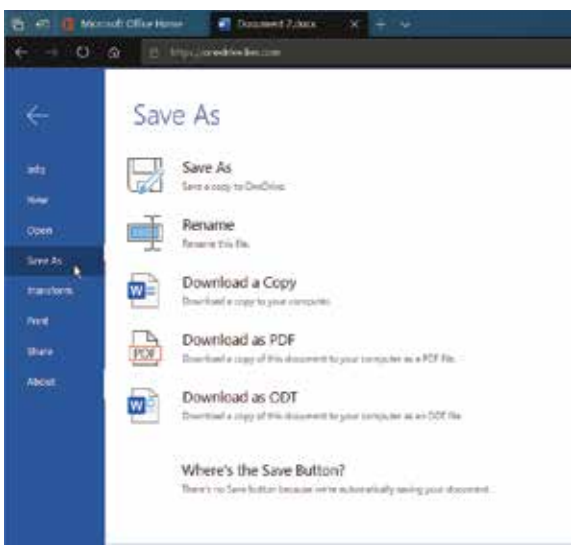
4. When the Word app opens on a new tab in the browser you are presented with a selection of ready-made templates that you can select. For example, choose the **Business letter** template



5 Edit the template to suit your requirements by inserting your name and address details, etc.

6 When you are happy with the letter, click the **File** menu item at the top-left of the window

7 Now, choose a save location and document format



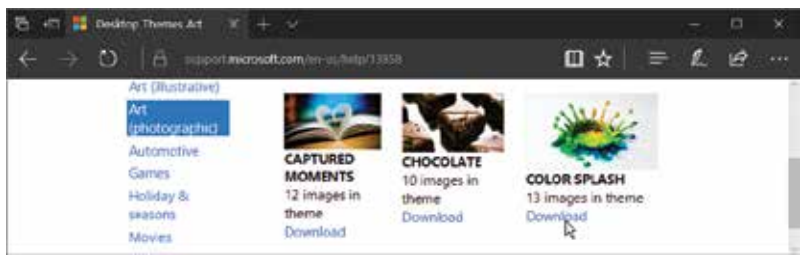
Use the **Rename** option before saving unless you are happy to use the automatically assigned default name.

Windows freebies

Microsoft knows we all like to get something for nothing so they offer free theme downloads with which to personalize your PC at **support.microsoft.com/en-us/help/14165**. The themes are divided into categories of interest, such as "Art (photographic)". To grab a free theme:

1. Click the **See all themes** link then choose a category from the list on the left of the themes page

2. Scroll through the list to choose a theme, then click its **Download** link to get the "themepack" file



3. When the download completes you will find the themepack file in your **Downloads** folder

4. Right-click on the file icon and choose **Open** to install that theme on your PC

Hot tip

Other free Microsoft downloads are available at this website, such as **Desktop Backgrounds** and **Language Packs**.

Hot tip

You can also download free **Themes** from the Microsoft Store.

Don't forget

You can change or uninstall themes at any time from **Settings**, **Personalization**, **Themes**. See page 99-106 for more information on themes.