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User Guide

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Some images in help content are examples only.

You can also read this help on your phone at **Settings** > **Help**.

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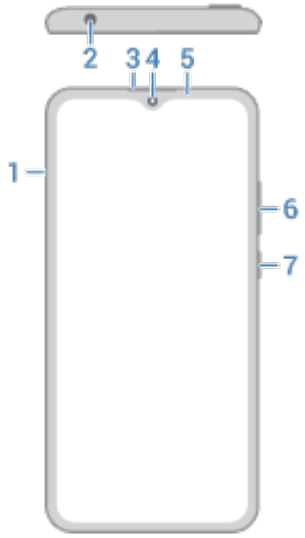
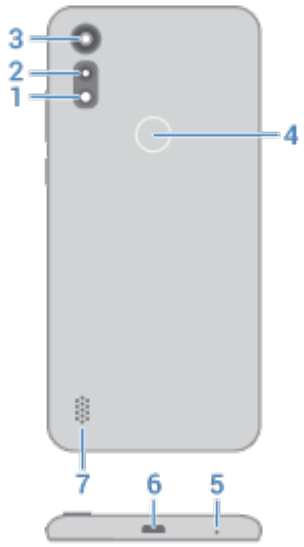
Hardware diagram



1. Tray for SIM and SD card
2. Headset jack
3. Earpiece
4. Front camera
5. Proximity sensor and notification light
   - Blinking green (phone on) = unseen notifications
   - Solid red (phone on) = low battery
   - Solid red (phone off) = charging but battery is too low to power the screen
   - Solid green (phone off) = fully charged
6. Volume up/down button
7. Power button



1. LED flash
2. Depth camera
3. Main camera
4. Fingerprint sensor
5. Microphone
6. Micro USB port for charging, transferring files, sharing connection with tethered devices.
7. Speaker

Insert and remove SIM and SD cards

About the SD card

Your phone supports a microSD card up to 256 GB.

The type to buy depends on how you'll format the card:

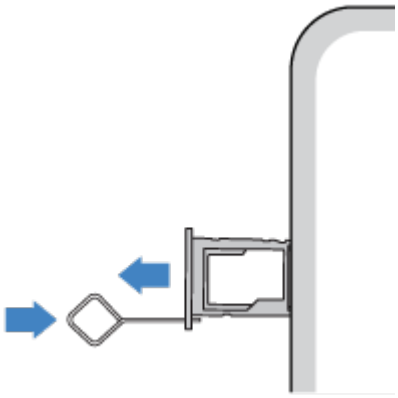
- **Portable storage** (can use card in different devices): A Class 2, 4, or 6 card is sufficient.
- **Internal storage** (card used only by phone): Use a high speed card such as UHS-1 type for best performance. Class 2, 4, or 6 cards are slower than your phone's internal storage, so using them for internal storage would slow your phone's performance.

Learn more about the differences between portable storage and internal storage.

Replace SIM or SD card

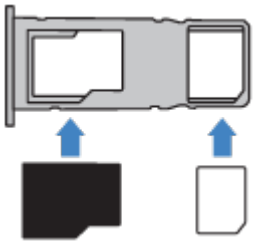
1. If you are removing an SD card, unmount it first (**Settings** > **Storage**).

2. Insert the tool into the hole in the tray and gently push to pop it out.

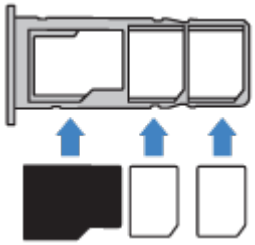


3. Insert or remove the cards as needed.

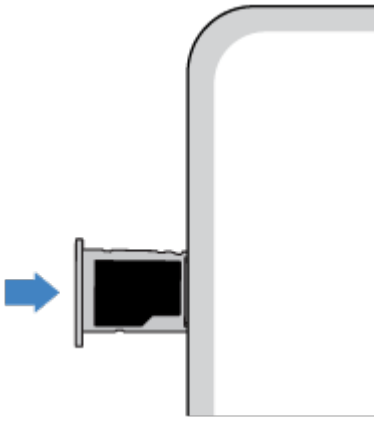
   To use an SD card with one SIM card:



   To use two SIM cards (dual-SIM models only):



4. Push the tray back into the phone.



Fix a problem

If you're having problems, try these troubleshooting steps:

- SIM card

- SD card

Manage dual SIMs

About dual SIMs

When two SIMs are inserted:

- You see at the top of the home screen. If you see , troubleshoot the issue.
- Both SIMs can make and receive calls and text messages.
- Only the owner of the phone (not additional users or guests) can access dual SIM settings.

Change SIM name, color, ringtone

When two SIMs are inserted, you'll see them referenced in apps like Contacts, Messages, and Phone. The SIM name shows your carrier and, if you're using the Personal and Work profile, shows which it's assigned to, but you can rename it. You can also change SIM icon color to make them easy to differentiate.

1. Go to **Settings** > **Network & internet** > **SIM cards**.
2. Touch the SIM to change.
3. Change settings as needed:
    - To rename a SIM, touch **SIM name**, then type a new name.
    - To change icon color, touch **Color**, then touch a color.
    - To change the SIM's ringtone, touch **Phone ringtone**, then select a ringtone.

Set up voicemail

Set voicemail password

Contact your carrier for help setting or recovering your password/PIN for voicemail.

Set mailbox greeting

Your carrier provides and manages your voicemail.

To set your greeting:

1. Touch > .
2. Touch & hold to dial into your mailbox.
3. Follow your carrier's system prompts. If your voicemail is not set up, contact your carrier for instructions.

Change voicemail options

1. Touch > > **Settings**.

   (If you don't see , swipe down on the screen.)

2. Touch **Voicemail**.
3. Touch **Advanced Settings**.
4. Change any of the options:
   - To change voicemail service from your provider to another voicemail service or app, touch **Service**.
   - To change the number dialed to access voicemail, touch **Setup**.

Set up email

Set up personal email

You can add multiple email accounts of the following types:

- Gmail
- Personal email from other providers (IMAP/POP)

If you added a Google account on your phone:

- When you open the Gmail app for the first time, you'll see your email for that account. You're already set up.
- To set up additional accounts, open Gmail, touch your profile icon , then touch **Add another account**.

If you didn't add a Google account to your phone and want to set up email for an IMAP/POP provider (an address that's not Gmail):

1. Open the **Gmail** app.
2. Follow the onscreen instructions to enter your email address, password, and account options.

   If you have problems setting up the account, read Google's help for Gmail.

Set up corporate email

If you use Microsoft Office Outlook on your work computer, your phone can synchronize emails, calendar events, and contacts with the Microsoft Exchange server. Before you start, you'll need the following information from your company's IT department:

- Email address
- Email password
- Domain name
- Username
- Server name
- Security type/SSL settings

- Client certificate requirement

To set up corporate email:

1. Open the **Gmail** app.
2. Do one of the following:
   - If this is your first time opening the Gmail app, touch **Add another email address**.
   - If you have been using Gmail with another account, touch your profile icon M, then touch **Add another account**.
3. Touch **Exchange and Office 365**.
4. Follow the onscreen instructions to enter your email address, password, and other information from your company's IT department.

Switch account views

In the **Gmail** app, touch your profile icon M, then select an account.

To open each inbox with one touch from your home screen, add task shortcuts:

1. Touch & hold M.
2. Drag ═ for each account to a blank space on your home screen.

Prepare for emergencies

Set up emergency information

You can set up emergency information for first responders or others to view from your lock screen, such as your emergency contact and medical information (blood type, allergies).

To set up your emergency information:

1. Go to **Settings** > **System** > **Advanced** > **About phone**.
2. Touch **Emergency information**.
3. Set up your information.

Note: Anyone who picks up your phone can see your emergency info without unlocking your phone.

View emergency information

1. Swipe up on the lock screen.
2. Below the keypad, touch **Emergency**.
3. Touch **Emergency information** twice.

Add message to lock screen

To add your name or a short message to your lock screen for anyone who finds your phone:

1. Go to **Settings** > **Security & Location**.
2. Touch **Lock screen preferences** > **Lock screen message**.
3. Type the text to display and touch **Save**.

Tip: Don't put your mobile number as your contact info unless you can access your voicemail from another device.

Send your location to emergency services

Not all carriers and countries support this feature.

If Android Emergency Location Service (ELS) works in your country and on your carrier's network and if you haven't turned off ELS, when you call or text an emergency number, ELS sends your location to authorized emergency responders to help them locate you.

If ELS is off, your carrier might still send the phone's location during an emergency call. For more information, check with your carrier.

To turn ELS on or off:

1. Go to **Settings** > **Security & location** > **Location** > **Advanced**.
2. Touch **Emergency Location Service**.
3. Turn **Send ELS location** on or off .

To learn more about ELS, read Google's help.

Turn emergency alerts off/on

Your phone can receive free, life-saving emergency alerts from the Federal Emergency Management Agency (FEMA) to inform you of extreme weather or other threatening emergencies in your area, AMBER Alerts, and Presidential Alerts during national emergencies.

When an emergency alert is sent out, appears in the status bar. Touch the notification to read the alert.

You can turn most alerts off or on (Presidential Alerts cannot be disabled) and adjust alert notification settings.

Note: Because alerts are intended to save lives, please consider carefully before turning alerts off. For more information, visit http://www.fema.gov/wireless-emergency-alerts.

1. Go to **Settings**.
2. Touch **Apps & notifications** > **Advanced** > **Emergency alerts**.
3. Adjust settings as needed.

Make it yours

Now that you're up and running (battery charged, contacts imported, accounts added), it's time for fun:

- Set the wallpaper.
- Assign ringtones or photos to friends you call.
- Find some games.

- Play some music.
- Start taking and sharing those selfies.

To protect your phone, be sure to:

- Set up a screen lock.
- Set up fingerprint security to unlock your screen safely and quickly with a touch.
- In case you ever lose your phone, set up Find My Device and record your IMEI number.

You'll probably also want to:

- Set up your Bluetooth and Wi-Fi connections.
- If you use multiple languages, set them up so they appear on your keyboard.
- Set your schedule for Do Not Disturb, to automatically silence your phone when you don't want to be interrupted.

Find your phone number

1. Go to **Settings** > **System**.
2. Touch **Advanced** > **About phone** > **Phone number**.

Visual assistance

Adjust colors if you're color blind

1. Go to **Settings** > **Accessibility**.
2. Touch **Color correction** and turn **Use color correction** on .
3. Touch **Correction mode** and choose an option.

How you see colors	Option to choose
It's difficult to tell violet from blue. Yellow and green appear redder.	Deuteranomaly (red-green)
Colors aren't bright. Red, orange, and yellow appear greener.	Protanomaly (red-green)
It's difficult to tell yellow and red from pink. Blue appears greener.	Tritanomaly (blue-yellow)

Color correction is an experimental feature and might not work correctly everywhere on your phone.

Use magnification gestures and icon

You can magnify the screen by triple tapping it or by touching by the navigation buttons.

To enable these gestures and add the icon:

1. Go to **Settings** > **Accessibility** > **Magnification**.
2. Adjust settings as needed:
   - To use gestures to zoom in and out, touch **Magnify with triple-tap** and turn it on .
   - To add , touch **Magnify with button** and turn it on .

Then, use these gestures:

- To zoom in/out, touch or triple-tap the screen, then touch the area of the screen to magnify.
- To zoom temporarily, touch , then touch & hold anywhere on the screen. Drag to move around the screen, then lift your finger to zoom out.
- To scroll while zoomed in, swipe the screen up or down with one finger.
- To move the screen around, drag it with two fingers.
- To adjust the zoom, pinch fingers together or apart.

You can't zoom in on the keyboard or the buttons.

Tip: You can also adjust font and display size.

Turn touch sounds on/off

1. Go to **Settings** > **Sound** > **Advanced**.
2. Do any of the following:
   - To hear a tone when you dial a number, turn on **Dial pad tones**.
   - To hear a click when you lock or unlock the screen, turn on **Screen locking sounds**.
   - To hear a click when you touch something on the screen, turn on **Touch sounds**.
   - To feel a vibration when you type on the keyboard, turn on **Touch vibration**.

If you don't want any of these sounds, just turn them off .

Hear notification sounds

You can assign a ringtone for notifications from specific apps.

You can also control sounds used to notify you of other events:

1. Go to **Settings** > **Sound** > **Advanced**.
2. To hear when your phone begins charging and reaches a full charge, turn **Charging sounds** on .

Use TalkBack to read screens

Hear descriptions of everything you touch.

Enable TalkBack

1. Go to **Settings** > **Accessibility**.
2. Touch **TalkBack** and turn **Use service** on .
3. Touch **Settings** and set the options you want.

When TalkBack is on

- Touch an item. Your phone speaks the name.
- Start typing. Your phone speaks each number or letter.
- Drag status bar down. Your phone speaks all of the notifications.
- Open a message, file, or book. Your phone reads the text out loud.

Change readout volume

- Press a Volume button to open volume settings, then use the slider to adjust the level.
- Or, during voice readout, repeatedly press a Volume button.

Stop readout

To pause or resume readout, press & hold both the Volume Up and Down buttons at the same time for three seconds, until you hear confirmation that TalkBack is on or off. You can change the accessibility feature associated with this shortcut.

Or, turn TalkBack off:

1. Go to **Settings** > **Accessibility**.
2. Touch **TalkBack** and turn **Use service** off .

More assistance

You can also:

- Use voice commands
- Dictate text instead of typing

Hearing assistance

Use volume booster for speaker

1. Go to **Settings** > **Sound** > **Advanced**.
2. Touch **Sound enhancement**.
3. Turn **BesLoudness** on .

Turn on video captions

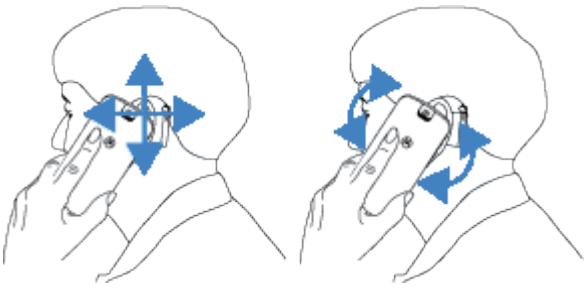
1. Go to **Settings** > **Accessibility**.
2. Touch **Captions** and turn **Use captions** on .
3. Specify options (language, text size, and style) for closed captioning.

Use hearing aids

To improve compatibility with hearing aids and reduce sound feedback:

1. Touch .
2. Touch > **Settings** > **Accessibility**.
3. Turn **Hearing aids** on .

During a call, hold the phone to your ear, then rotate or move it to get the best position for speaking and listening.



Set up TTY device

Not all carriers support this feature.

For text-based communication, you can use text messaging and email.

If you prefer to connect to a TTY device:

1. Touch .
2. Touch > **Settings** > **Accessibility** > **TTY mode**.
3. Select a mode:
   - **TTY Full**: Type and read text on your TTY device.
   - **TTY HCO**: Type text on your TTY and listen to voice replies on your phone.
   - **TTY VCO**: Speak into your phone and read text replies on your TTY.
4. Connect your phone and TTY with the audio cord that came with your TTY.

Dexterity assistance

External switch or keyboard

If you're unable to use a touchscreen, Switch Access lets you control the phone using external switches or keyboard keys to select items, scroll, enter text, and more.

To use Switch Access, you must have one of the following:

- **An external switch.** USB or Bluetooth switch devices send keystroke signals to your phone.
- **An external keyboard.** Standard USB or Bluetooth keyboards can work as switch devices by assigning one or more keys to actions.

Connect the external device to your phone using the manufacturer's instructions. Learn more about connecting with Bluetooth.

Set up Switch Access

1. Go to **Settings** > **Accessibility**.
2. Touch **Switch Access**.
3. Turn **Use service** on .
4. Follow onscreen instructions to select:
   - Number of switches
   - Scanning options
   - Switch assignments

To adjust Switch Access later:

1. Go to **Settings** > **Accessibility**.
2. Touch **Switch Access** > **Settings**.
3. Adjust options.

Use Switch Access

- To start scanning and highlighting items on the screen, press the assigned switch or key.
- To select a highlighted item, press the assigned switch or key, then press the switch or key assigned to select options.

Use accessibility shortcuts

Use accessibility menu

Get quick access to an accessibility menu that gives you better control of your phone.

To add the icon:

1. Go to **Settings** > **Accessibility**.
2. Touch **Accessibility Menu**.
3. Turn **Use service** on .

> **Tip:** To increase the size of the buttons on this menu, touch **Settings**, then turn **Large buttons** on .

1. Use two fingers to swipe up from the bottom of the screen.

   If you've set other accessibility tools to use this gesture, swipe up with two fingers and hold to switch between tools.
2. Choose an option from the menu.

To use the menu:

1. At the bottom of the screen, touch .

   If you've set other accessibility tools to use this icon, touch & hold it to switch between tools.
2. Choose an option from the menu.

Press Volume buttons for accessibility services

You can press the Volume buttons to turn an accessibility feature of your choice (TalkBack, Switch Access) on or off.

To enable the shortcut:

1. Go to **Settings** > **Accessibility**.
2. Touch **Volume key shortcut**.
3. Turn **Use service** on .
4. To change the accessibility feature associated with the shortcut, touch **Shortcut service**.
5. To use the Volume buttons from the lock screen, turn **Allow from lock screen** on .

To use the shortcut:

Press and hold the Volume Up and Down buttons at the same time for three seconds.

You'll hear confirmation that the feature has been turned on or off.

About your home screen

You see the home screen when you turn on and unlock your phone or touch .

You can add more pages to the right as needed. To add a page, drag an app shortcut or widget to the edge of an existing page and place it on the new page.

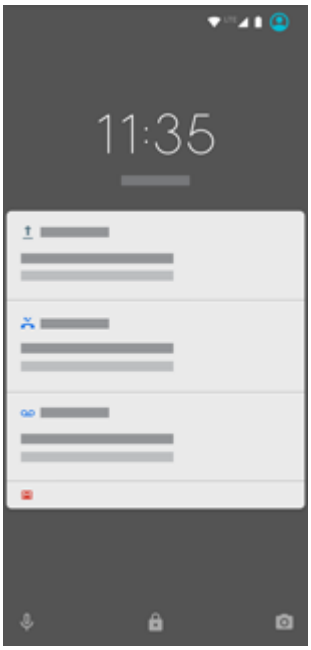
Swipe right or left to move between pages.

Here are the parts of your home screen:

If you want an entirely new look and feel for your home screen, you can use a different launcher. For a less drastic renovation, just change the wallpaper.

About your lock screen

The lock screen appears when you're using a screen lock and you turn on or wake your phone.



From the lock screen, you can:

- **Make an emergency call.**
- **View and respond to notifications.** Double touch one to open it.
- **Open your quick settings.** Swipe down from top of screen.
- **Start a voice search.** Swipe right.
- **Open the camera.** Swipe left.
- **Go into Lockdown.** Temporarily turn off notifications and fingerprint unlocking.

You can customize your lock screen to:

- Control which notifications, if any, appear.

- Add your name or a short message.

If this is your first smartphone

Learn the basics

To get around your phone, here are the key concepts.

- Use these icons to move between screens:

  takes you back one screen.

  returns you to the home screen from any app.

  lets you switch between recent apps.

- In addition to touching the screen to select items, you can use other gestures, such as pinch to zoom.
- The icons at the top of your home screen tell you important stuff at a glance, like your phone's battery level and network connection, and whether you've missed a call.
- Your phone and apps send you notifications for things like new messages, calendar events, and upcoming alarms. You'll find notifications in several places, and can do a lot with them.

To learn about these common tasks, touch one below:

- Answer a call.
- Make a call.
- Set an alarm.
- Turn the flashlight on/off.
- Listen to music.

Get apps

Your phone comes with many fun and useful apps, but you can really unlock its power by installing apps that suit your lifestyle. Go to Play Store to explore free and paid apps that help you be more productive, organized, informed, in touch, and entertained.

Protect your phone

You carry your phone around with you, and accidents happen; phones get lost sometimes. So set up some security and prevent heartache if you and your phone become separated.

Set up a screen lock. This is your first line of defense in keeping your sensitive information safe. Prefer numbers, shapes, words? Set up a PIN, pattern, or password required to unlock your phone. Learn how.

A screen lock doesn't prevent you from immediately answering a call or accessing your camera.

Display your owner info. On your lock screen, you can discreetly display a "please return" message with some of your contact info so that, if your phone is lost, someone can to return it to you. Learn how.

Enable lost phone features. For peace of mind, check out Find My Device, in case you ever need to remotely locate and lock or erase your phone.

Personalize your phone

While changing your wallpaper is probably your first customization, don't stop there. Be sure to explore your Settings to set ringtones, font sizes, data usage preferences, keyboard preferences, and much more. It's a great way to learn many of your phone's capabilities while customizing it to suit your needs.

In most apps you can touch ☰ or ⋮ for app-specific settings. Be sure to see what options are available to you there, too.

Manage cellular data

Understand your data usage. Keep an eye on your data usage and learn how to make the most of it. See which apps use large amounts of data and adjust their settings. If your phone is using too much data, you can also stop accounts from auto-syncing.

Use Wi-Fi to conserve cellular data. When you connect to a Wi-Fi network, your data will use that network connection instead of your carrier's network, saving your cellular data for when you need it. Learn how to connect to Wi-Fi networks.

Useful to know

Find phone info. To find your phone number, device name, and other information, go to **Settings** > **System** > **Advanced** > **About phone**.

Tell your phone what to do. Use your phone hands-free with voice commands. Tell it to navigate you, and listen to it speak the directions to you as you drive--it'll even reroute you if you've gone off course. Tell it to set alarms, find information on the web, make calls.

Never miss a photo opportunity. Automatically open the camera right from your lock screen. Just twist your phone twice. Or, swipe 📷 left. You can automatically back up your photos and videos with your Google account or with other photo sharing apps available from Play Store.

Store your stuff. You have several storage options. Store apps and content on your phone. For more storage space, use an SD card for photos, videos, and music. You can open stored items in associated apps, like Photos to see your photos and videos. For even more storage space, plus the ability to access your media and files from any internet-connected device (phone, computer, tablet), use cloud storage. Your Google account includes free cloud storage on Drive, which has its own app and is also available from the ⟨share⟩ menu throughout other apps.

Wi-Fi hotspot. You can use your phone as a Wi-Fi hotspot to share your internet connection with your other devices that need internet access (for example, a laptop or tablet).

Reboot phone. In the unlikely event that your phone becomes unresponsive, frozen, shows a blank or black screen, or doesn't respond to the Power button, you can reboot it. Press and hold the Power button for 7 - 10 seconds. The phone will restart normally.

Certain features, services, and applications are network or carrier dependent and may not be available in all areas.

If you had an iPhone

Welcome to Android! Here are some differences between your old iPhone and your new phone.

Your assistant: You've retired Siri. Now, find info and get things done with Google Assistant. Just set up “OK, Google”. Then ask for info or help with everyday tasks.

Apps:

- Goodbye Apple App Store, hello Google Play Store. Play Store is now your default app store. Apps aren't compatible between iPhone and Android. However, many developers make iPhone and Android versions of their apps; if the app stores your data online, then you can switch with little effort. Just download the Android version from Play Store and log in.
- Keep on making video calls. Use the Duo app to make video calls with friends who have iPhones or Android phones.
- Continue listening to podcasts. You can listen with the YT Music app. Or, there are lots of podcast apps on Play Store - search for “podcast” in Play Store and download one of your choice.
- Install apps remotely. On a computer, visit play.google.com. Browse apps on the bigger screen and then install them on your phone from your computer.

Your home screen:

- On your old iPhone, your home screen was far left. Now, you start with one home screen and can add more pages to the right as needed.
- Your old phone showed all apps on your home screen. With your new phone, you can put shortcuts to your most important apps on your home screen for easy access. Or, find your full list by swiping up from your favorites tray. This frees up room on your home screen for widgets, making your new home much more lively.
- Like your old iPhone, you'll see notifications at the top of the screen, which you can swipe down to review. But on your new phone, you can swipe them left or right to dismiss them.

Quick access to settings: On your old iPhone, to adjust settings you opened a Settings app. You can still do that. But now you've also got quick settings. Swipe down from the top of the screen for easy access to toggles for airplane mode, Wi-Fi, and other frequently-used settings.

In the cloud: Your Google account is your key to cloud storage with Google. If you migrated your contacts to your phone, then you can see them from any device or computer by logging into Gmail. Your Google account includes apps like Calendar and Drive that let you work well with others. And it has apps that let you play too - access your photos, videos, music from any device when you log in with your Google account. Use YT Music to upload your iTunes library.

About your Google account

Benefits of your account

When you set up your phone, you added a Google account. If you haven't had a Google account before, this is more than just a password you set up for your phone.

A Google account lets you organize and access your personal information and files from any computer or mobile device:

- **Synchronize everything.** Never lose your contacts. Associate them with your Google account if you create them on your phone, and view them from Gmail on any computer or by signing into your Google account on any phone. Create emails or calendar events on your phone and view them on any computer. Access your browser bookmarks from any device.
- **Store in the cloud.** Upload your photos, videos, and music to the cloud; get to all of it without taking up space on your phone.
- **Keep your stuff secure.** Your account password secures it all and lets you access it from anywhere.

Maintaining your account

Other than remembering your password, you don’t need to do much maintenance on your Google account - just enjoy the benefits of your secure, synchronized information. However, you can:

- Control how frequently your phone syncs your information.
- Review and manage the information Google collects from you, such as search and browsing history.

Learn about Google apps

Many Google apps, like Gmail, Chrome, Photos, and Maps are preloaded on your phone. To learn about and download additional Google apps, read Google's information.

Can't sign in to Google account

If you're having problems signing in to your account, read Google's support information.

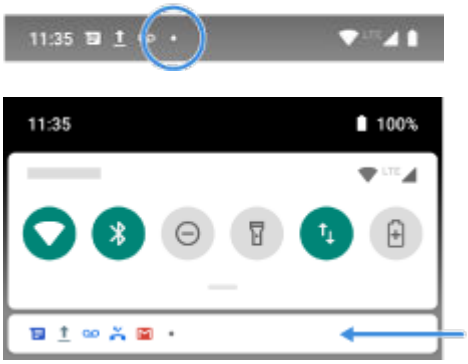
Status bar icons

About status icons

The status bar at the top of the home screen contains icons that help you monitor your phone.

- **On the left,** icons tell you about apps, such as new messages or downloads. If you don't know what one of these icons means, swipe the status bar down for details.
- **On the right,** icons tell you about your phone's battery level and network connections.

A dot means there are more icons to view. Drag down from the top of the screen to see all icons.



What status icons mean

These are the icons from apps that came on your phone and the phone status icons.

Icon	Meaning
	CALLS
	Active call.

	Missed call.
	Speakerphone on.
	Microphone muted.
	NETWORK
	Connected to cellular/mobile network (full signal). Speed of your network connection is also shown. For example, H or 4G. Possible speeds, from slowest to fastest, are 1X, 2G, 3G, H, H+, 4G. Available speeds depend on your carrier and your location.
	Poor connection to cellular/mobile network.
	Connected to different cellular/mobile network (roaming).
	Data Saver is on, preventing apps from using background data.
	Wi-Fi network within range.
	Connected to Wi-Fi network.
	Poor connection to Wi-Fi network.
	No SIM card.
	Location services are in use.
	Airplane mode on.
	CONNECTIVITY
	Bluetooth on.

Trusted device connected.

Your phone is a Wi-Fi hotspot. Devices can connect to share your data connection.

Wireless display or adaptor connected.

Connected by USB cable.

USB tethering enabled.

NFC enabled. Only some versions of this phone, sold in certain countries, support this feature.

SYNC AND UPDATES

App updates are available for download from Play Store.

App successfully installed from Play Store.

Email and calendar sync in progress.

Upload complete.

Download complete.

Google backup in progress.

Google backup complete.

SOUND

Vibrate.

	Song playing.
	DO NOT DISTURB
	Do Not Disturb is on.
	BATTERY
	Battery fully charged.
	Battery charging.
	Battery low.
	Phone is in Battery Saver mode.
	ALARM AND CALENDAR
	Alarm set.
	Upcoming calendar event.
	EMAIL AND MESSAGING
	New Gmail message.
	New text message.
	New voicemail.
	Important alert.

OTHER ICONS

	Screenshot is available.
	Focus mode is on.

Apps that you download might show other icons to alert you about their status.

Certain features, services, and applications are network or carrier dependent and may not be available in all areas.

Phone terms you should know

Airplane mode
A mode allowing access to a device's non-wireless functions (e.g., music, games, etc.), while disabling its wireless radio functions that are banned on airplanes during flight.

app
Software that you can download for added functionality, such as games, email apps, bar code scanners and more. Some apps are already on your phone, and more can be downloaded from your phone's app store.

Bluetooth™
A short-range wireless technology you can use to connect a device to other nearby Bluetooth-capable devices and accessories, such as headsets, speakers, printers, etc. Use Bluetooth to make handsfree calls on a headset or in your car, listen to music on wireless speakers, use a wireless mouse or keyboard, or print a document in another room. Set up Bluetooth.

cellular network or mobile network
A network of radio-transmitting towers. You make calls on your phone using radio waves sent between the phone and the network towers. You also send data and access the Internet on this network. Carriers use different technologies to handle these radio transmissions (GSM, CDMA, Edge, 3G, 4G, LTE, HSPA, iDEN).

data
Information sent or received from your phone other than calls and text messages. You may use data when you access the internet, check your email, play games, use apps and more. Background tasks, such as syncing or location services, may also use data.

data usage
The amount of data your phone uploads or downloads over a network in a given period. Your phone uses your carrier's cellular network or over a Wi-Fi network. Depending on your plan with your carrier, you may be charged additional fees when your data usage exceeds your plan's monthly limits.

GPS
Global Positioning System. A global satellite-based system for determining precise locations on Earth.With GPS, your phone becomes your navigator when you're driving and your concierge when you're looking for a nearby meal, movie, or cup of coffee.

mobile hotspot
A device or app that lets you share your mobile data connection with multiple devices via Wi-Fi. You can connect different devices to your hotspot, including notebooks, netbooks, MP3 players, cameras, Smartphones, and portable gaming systems. The number of devices that can connect at one time depends on your carrier and connection speed.

notification
An alert from your phone or an app on your phone. Your phone displays icons in the status bar to notify you of new messages, calendar events and alarms. Icons can also indicate ongoing status, such as connection to a Wi-Fi network.

Play Store
Google's store where you can download apps, books, movies, and music. Choose from an assortment of free books or apps; purchase from an even larger selection.

SD card
Secure Digital (SD) card. A small, high-capacity removable memory card used in small, portable devices such as mobile phones, tablets, and digital cameras.

short cut
An icon you can add to your home screen that lets you quickly open an app. Create short cuts for apps you use frequently.

SIM card
Subscriber Identity Module (SIM) card. A card that securely stores information your carrier uses to authenticate your phone on the cellular network.

software update
An update to your phone's operating system that typically includes new features and fixes reported problems. The update is wirelessly downloaded to your phone at no additional cost to you.

status bar
Thin bar at the top of your home screen that displays the time and icons that tell you about your phone's battery and network connections. Apps display icons in the status bar to alert you of events, such as new messages.

sync
The process of sharing the same information across multiple devices and websites. Contacts, calendars and email are often synced through cloud services, so you can enter information on one device and access it through another.

widget
An element you can add to your home screen that gives you quick access to information or frequent tasks. For example, widgets can provide weather updates, upcoming calendar events. Many are preinstalled on your phone. Apps you download may also include widgets.

Wi-Fi
A short-range wireless technology that provides a high-speed internet connection to wireless data devices. Many locations offer Wi-Fi connections, including airports, hotels, restaurants and more. Using a Wi-Fi connection instead of your cellular network can help reduce your cellular data usage. Some public Wi-Fi connections may not be secure. You should only connect to those you trust and use some form of internet security on your devices. Set up Wi-Fi.

Certain features, services, and applications are network or carrier dependent and may not be available in all areas.

Learn gestures

Gesture	Description
Touch	Press with one finger and lift. Result: Open something (app or email) or choose something (checkbox, icon). It's like clicking a mouse on a computer.
Touch & hold	Press and wait before lifting one finger. Result: Select something (app icon, text on a page) and see possible actions. Try it: Touch & hold text on this page to see the copy feature.
Drag	Touch & hold an item and then, without lifting, slide your finger until you reach the target position. Result: Move elements on the screen; for example, change a toggle from ON to OFF. Try it: Drag an app shortcut or widget from one spot on your home screen to another.
Swipe	Quickly move one finger across the screen, without pausing when you first touch (so you don't drag instead). Result: Switch between home screens or between tabs in an app. Or, move quickly through a list. Try it: Open the Phone app and swipe left/right to switch between tabs.
Pinch out to zoom	Put two fingers on the screen and then drag them apart. Result: Zoom in to see larger version of photos and maps. Or, open expandable notifications. Try it: Open a photo and pinch out to zoom in on an area. **Tip:** If you have visual impairments, you can enable additional magnification gestures.
Pinch in to zoom	Put two fingers on the screen, far apart, and then drag them together. Result: Zoom out to see smaller version of photos or maps. Or, close expandable notifications.

More gestures: The Moto app includes additional actions for controlling your phone, which you can turn on/off.

Use quick settings

Open quick settings

Settings you adjust frequently, like Wi-Fi and Bluetooth, are “quick settings”, easy to get to from any screen.

To see your first few quick settings, swipe down once from the top of your screen.

To see all quick settings, swipe down again.

Adjust quick settings

Do one of the following:

- **Touch** an icon to toggle the setting on or off .
- **Touch & hold** an icon to adjust related settings.

Icon	Setting
	Wi-Fi
	Bluetooth
	Do Not Disturb
	Flashlight
	Auto-rotate

Battery Saver

Mobile data

Airplane mode

Data Saver. Appears after you turn on Data Saver the first time.

Night Light. Appears after you turn on Night Light the first time.

Wi-Fi hotspot. Appears after you turn on hotspot the first time.

You can also slide to adjust screen brightness.

Open all settings

To open the full list of all settings:

- Open quick settings and touch .
- Or, open the **Settings** app.

Tip: You can search the Settings app to find what you need quickly. Just touch at the top of the app and type your search term.

Customize quick settings

You can rearrange quick settings, putting your most used at the top. You can also add or remove them.

1. Open quick settings.
2. Touch .
3. Drag to add, remove, or rearrange.

To return quick settings to its original state, touch > **Reset**.

Tip: You can also change the background color to be light or dark.

Wake or put screen to sleep

To save battery power, your screen automatically goes to sleep if you haven't used it for a while. You can adjust the amount of time before your screen should sleep.

To wake sleeping screen:

- Press the Power button. If you've set up a screen lock, you need to unlock it.
- If you've added your fingerprint to the phone, touch the sensor to wake and unlock your phone.
- Your screen automatically wakes when you have an incoming call.

To put screen to sleep:

- Briefly press the Power button. When you set down your phone, it's good habit to do this. You save a bit of battery and keep it secure with the screen lock.
- To keep your screen off and phone quiet when you don't want interruptions, like at night, use Do Not Disturb settings.

Adjust volume

Use Volume buttons

In-call audio. When you're on a call, the Volume buttons control the volume of the other person.

Media. When you're not on a call, the Volume buttons control media volume during playback or before you listen.

Phone ringtone, notification sounds, and alarms. To adjust these volumes, press a Volume button and then use this shortcut on your home screen:

1. Touch to toggle the phone ringtone and notification sounds between on , silent , and vibration only .
2. Slide to adjust media volume.
3. Touch to mute media volume.
4. Touch to access all volume controls (call, ring, alarm).

Silence with Power & Volume buttons

To silence a ringing phone, press either the **Power** button or the **Volume down** button.

To switch to vibrate at any time, press & hold the **Power** & **Volume up** buttons until you feel a vibration and see .

If you want to customize Power & Volume up so that it silences the phone instead of vibrating:

1. Go to **Settings** > **System** > **Gestures**.
2. Touch **Prevent ringing** > **Press Power & Volume Up together** > **Mute**.

Tip: Use Do Not Disturb to silence all calls, messages, events, and reminders. Turn it on from quick settings, or schedule it to turn on automatically during certain times or during calendar events.

Pick up to silence

You can simply pick up your phone to silence incoming calls and alarms, and to turn vibration on.

To enable this gesture:

1. Open the **Moto** app.
2. Touch > **Moto Actions**.
3. Touch **Pick up to silence** and turn it on .
4. If you want this gesture to silence calls but not alarms (or vice versa), touch **Settings** and turn the appropriate option off .

Turn flashlight on and off

To turn your flashlight on or off:

1. Open quick settings.
2. Touch or .

Or, make a chopping motion to turn the flashlight on or off.

If the camera opens instead of turning on the flashlight, be sure to use a chop gesture, not a twist gesture.

To control the chop gesture:

1. Go to **Settings** > **System** > **Gestures**.
2. Touch **Fast flashlight** and turn it on or off.

Use voice commands

Train launch phrase

1. Open the Google app, then touch **More** > **Settings** > **Voice** > **Voice Match**.
2. Turn on **Access with Voice Match** and follow the onscreen instructions to record your voice.
3. If you want voice commands to access your email, calendar, or contacts when your phone is locked, turn **Lock screen personal results** on .

Speak a command

Not all languages support voice commands.

Tell your phone to call people, get directions, send messages, set alarms. The possibilities are enormous.

1. From the home screen or when you've started a search, say “OK, Google.”
2. When the phone responds, say the command (for example, “Call Elise” or “Set alarm for 7 AM tomorrow”).

   Tip: To see a list of commands, say “Help.”

3. Some commands cause your phone to speak a response to you. To stop the phone from speaking, touch .

Fix a problem

If your phone isn't recognizing “OK, Google” commands:

1. Open the Google app.
2. Touch **More** > **Settings** > **Voice** > **Voice Match**.
3. Touch **Voice Match** > **Retrain voice model**.

Get turn-by-turn directions

Navigation and battery life

Navigation is one of the most power-intensive apps, so keep your phone plugged into a high-quality car charger, especially if you're streaming music and/or using Bluetooth (also power-intensive features).

Use Directions widget

1. Before you hit the road, add a Maps Directions widget to your home screen, and you'll have directions to any destination you choose.
2. When you're ready to roll, just touch the widget, and your phone will talk you through the directions.

Tip: Combine your Directions widgets into a folder on your home screen.

Get directions to home or work

Get directions from anywhere to your home or work addresses with one touch by setting up a task shortcut for the Maps app:

1. Touch & hold .
2. Drag ═ to a blank space on your home screen.
3. If you haven't set your home or work address yet in Maps, touch the shortcut and follow the onscreen instructions to add it.

When you're ready to roll, just touch the shortcut, and your phone will talk you through the directions.

Use voice commands to get directions

Tell your phone to provide directions to a destination:

1. Say your launch phrase.
2. Say “Navigate to [destination].”

Use Time and Weather widget

Add widget to home screen

Put a clock on your home screen and get quick access to alarms, your calendar, and the weather.

1. Touch & hold the home screen.
2. Touch **Widgets**.
3. Touch & hold the **Time and Weather** widget, then drag it to a home screen page.

Set or delete alarms

1. Touch the time.
2. Adjust alarms:
   - To use an existing alarm, switch it on. Touch to view or edit its ringtone.
   - To add a new alarm, touch and set the time and ringtone.
   - To delete an alarm, touch next to it, then touch .
3. To control general alarm settings, like alarm volume and snooze duration, touch > **Settings**.

When an alarm is set, shows in the status bar.

Manage cities for weather forecasts

The Time and Weather widget displays current temperature for your location or for a city you specify.

To display the temperature for your current location:

1. Do one of the following:
   - Touch **Add cities**.
   - Or, touch the current temperature, then touch > .
2. Turn **Current location** on.

> **Tip:** To switch between Fahrenheit and Celsius, touch **Temperature unit**.

To see a forecast, touch the current temperature on the widget.

To add a city:

1. Do one of the following:
   - If you haven't added locations yet, touch **Add cities**.
   - Or, touch the current temperature, then touch .
2. Touch **Add new location**.
3. Enter a city name or ZIP code, then touch .

4. Touch the city to add.

> **Tip:** To switch between forecasts for multiple cities, touch the temperature, then swipe left or right.

To remove a city:

1. Touch the temperature.
2. Touch ≡ > **Settings**.
3. Touch ✕ next to the city's name.

View your calendar

Touch the current date to open your calendar, where you can view or add upcoming events.

Manage time spent on your phone

Understand your habits

1. Go to **Settings** > **Digital Wellbeing & parental controls**.
2. If this is your first time using this feature, touch **Show your data**.
3. Review the chart to see:
   - Time you spent using phone today
   - Which apps you've had on screen and for how long
   - How often you unlocked the phone today
   - How many notifications you've gotten
4. For more information, touch a label on the chart. For example, to see your screen time for the week, touch today's usage time.

> **Tip:** To find Digital Wellbeing & parental controls as an app, turn on **Show icon in the app list**.

Limit daily screen time

For individual apps, you can set a timer that limits the amount you use the app daily.

> **Tip:** To manage your child's screen time, use parental controls.

To set an app timer:

1. Go to **Settings** > **Digital Wellbeing & parental controls** > **Dashboard**.

   Or, **Settings** > **Apps & notifications** > **Screen time**.
2. Next to the app you want to limit, touch ⌛.
3. Set the total time that you can use the app per day.

When you reach your time limit in an app:

- The app closes.
- Its icon dims and no longer opens the app.

The app timer resets at midnight. To use the app before midnight, go back to the timer in **Settings** and extend its time or delete the timer.

Pause distracting apps to focus

Use Focus mode to pause selected apps for fewer distractions.

1. Go to **Settings** > **Digital Wellbeing & parental controls** > **Focus mode**.
2. Choose which apps you want to pause.
3. Do one of the following:
   - To turn it on, touch **Turn on now**.
   - To have it turn on automatically, touch **Set a schedule**, then select days of the week and start/end times.

When Focus mode is on:

- You'll see in the status bar.
- You won't be able to use the selected apps and won't get notifications from them.

Tip: To add Focus mode to quick settings, open quick settings, touch , then drag the tile where you want it.

To turn Focus mode off:

- Open quick settings and touch .
- Or, on the notification, touch **Turn off now**. (To turn it off for a short period, touch **Take a break**.)

To remove the schedule:

1. Do one of the following:
   - Open quick settings, then touch & hold .
   - Go to **Settings** > **Digital Wellbeing & parental controls** > **Focus mode**.
2. Next to Schedule, touch .

Tip: To mute sounds, stop vibration, and block notifications for all calls and notifications, use Do Not Disturb.

Make it easier to put your phone away at bedtime

You can schedule changes to get ready for sleep.

1. Go to **Settings** > **Digital Wellbeing & parental controls** > **Wind Down**.
2. Turn on **Use Wind Down**.
3. Adjust start and end times if needed.

4. Set what your phone should do during this scheduled time:
   - Remove screen colors (turn on **Grayscale**).
   - Silence your phone (turn on **Do Not Disturb**).
   - Filter out blue light for a warmer tone (turn on **Night Light schedule**).

Use parental controls

You can:

- Control your child's access to devices and apps
- Control location settings and view the location of your child's supervised device
- Set daily usage limits, monitor app usage, and remotely lock supervised devices
- Set filters and controls on what your child can browse, purchase, or download using Chrome, Google Search, Play Store, and YouTube

You'll need to set up parental controls on your and your child's devices.

To set up parental controls on this phone:

1. Go to **Settings** > **Digital Wellbeing & parental controls**.
2. Touch **Set up parental controls**.
3. Follow onscreen instructions to set up the phone for child or adult usage.
4. To set up parental controls on the other device, refer to the help for that device.

To learn more, read Google's help.

Use onscreen keyboard

Open, close, resize keyboard

To open the keyboard, just touch an area where you can enter text or numbers.

To close the keyboard so you can see other parts of the screen, touch .

To make the keyboard larger, turn your phone horizontally. If your screen doesn't rotate, check your auto-rotate setting.

Tip: If you installed other keyboards, you'll see next to the navigation buttons when you're typing. To switch to a different keyboard, touch .

Type special characters

Touch & hold a key to see related special characters. For example:

- Touch & hold **.** to see other punctuation marks.
- Touch & hold **e** to see **é** and **3**.

Tip: To insert a period followed by a space, touch the spacebar twice quickly.

Capitalize letters

To type in ALL CAPS, touch twice, quickly, so you see . Touch it once more to turn ALL CAPS off.

To change capitalization of a word you've already typed:

1. Select the word.
2. Touch until you see the capitalization you want: first letter only, ALL CAPS, or lowercase.

Use glide typing

You have two options for entering text: type one letter at a time (multi-touch typing) or slide your finger through all the letters in a word using one continuous motion (glide typing). Start typing either way and switch whenever you like.

When you're using glide typing, you can:

- **Type a word.** Drag your finger over the letters in the word.
- **Delete words.** Drag left slowly from to select a word or string of words, then lift your finger to delete.
- **Enter apostrophes in common words.** Drag through the letters and the apostrophe is automatically inserted.
- **Add a space.** There's no need to use the space bar. Just lift your finger and start the next word.

You can disable glide typing.

Get suggestions

Use suggestions to type faster.

When you're typing, you'll see a list of suggested next words above the keys:

- Touch a word in the list to insert it in your text.
- If you don't like a suggested word, touch & hold it, then drag it to .

You can limit or turn suggestions off.

Spell check and auto correct

Misspelled words are automatically corrected as you type:

- To undo a correction, touch .
- To prevent that word from being auto-corrected again, add it to your dictionary by touching the word in the list of suggestions above the keys.

If auto-correction is turned off, you can still check spelling:

1. After you're done typing, review your text; misspelled words (and words not in your dictionary) are underlined.
2. Touch an underlined word:
   - If the word is spelled correctly, touch it in the suggestion bar.
   - If the word is misspelled, select the correct word in the suggestion bar or type the correction.

Type in multiple languages

If you have added multiple languages as a system language in your phone settings, keyboards and text suggestion are available for those languages:

- When using a keyboard language other than your primary system language, available keyboard languages are shown on the spacebar.
- To toggle between languages, touch .
- To see a list of available keyboards, touch & hold or the spacebar.

You can add keyboards for other languages.

Cut, copy, paste text

You can select and copy text from web pages and messages.

1. To select text, touch & hold a word.
2. Touch **Copy**, **Cut**, **Share**, **Select all** or:
   - Select more text. Drag the sliders .
   - Get information about selected text. Touch **Web Search**.
   - Translate selected text. Touch > **Translate**. (If you don't see this option, install the Google Translate app.)

3. To paste text, touch to insert at the cursor or select a block of text to replace. Then touch **Paste**.

Tips:

- In some apps, you need to double-tap a word to select it (instead of touching & holding it).
- When you use **Copy**, the text is copied to the clipboard in your phone's memory, overwriting previous text in the clipboard. If you want to save and manage everything you copy into the clipboard, search for “clipboard manager” in Play Store to select and download an app.

Use voice typing

Enable keyboard mic for dictation

If you don't see on your keyboard:

1. Go to **Settings** > **System** > **Languages & input**.
2. Touch **Virtual keyboard** > **Gboard**.
3. Touch **Voice typing** and turn **Use voice typing** on .

Dictate text

1. Touch a text field to show the onscreen keyboard.
2. Touch on the onscreen keyboard.
3. Speak what you want to type:
   - Speak naturally but clearly. There's no need to shout or hold the phone close to your mouth.
   - To include punctuation, say “comma,” “period,” “question mark,” or “exclamation point.”
   - To pause or restart, touch .
   - To delete a word, touch .

Fill in forms automatically

Don’t retype your personal information again and again. Save it securely, then with just one touch, fill in passwords, addresses, credit cards, and other information saved to your Google account.

To set it up:

1. Go to **Settings** > **System** > **Languages & input**.
2. Touch **Advanced** > **Autofill service**.
3. Select **Google**, then touch .
4. Touch > **CONTINUE**.
5. Touch categories to review and edit personal information, addresses, credit cards, and passwords.

Change wallpaper

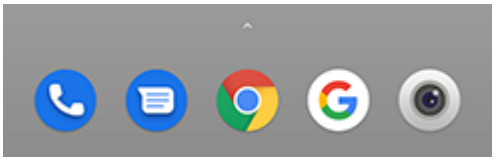
You can change the background image on your home screen or lock screen. Use your own photos, images that came on your phone, or images from an online category.

Tip: If your battery is low, temporarily change animated wallpaper to a static image to save power.

1. Touch & hold a blank area on your home screen, then touch **Wallpapers**.
2. Touch a wallpaper or photo to use.
3. Touch **Set wallpaper**.
4. Select whether you want to use the wallpaper on your home screen, lock screen, or both.

Customize your Favorites tray

The Favorites tray at the bottom of the home screen gives you one-touch access to your most-used applications. You can customize these app shortcuts.



To change the app shortcuts:

1. Touch & hold one of the app shortcuts, then drag it up and drop it on **Remove**.
2. Swipe up from the bottom of the home screen to open your app list.
3. Touch & hold the app you want. When the new shortcut appears, drag it to the empty spot in your tray.

Tip: You can also use folders in your Favorites tray.

Add widgets, shortcuts, or folders

Add widgets

Widgets stream information, giving some of an app's functionality without opening the app. For example, the Calendar widget shows your daily agenda and gives you one-touch access to your full calendar.

To add a widget:

1. Touch & hold the home screen.
2. Touch **Widgets**.

   Widgets are listed under their related apps.
3. Touch & hold a widget to add it.

You can make some widgets larger to view more content:

1. Touch & hold the widget until it's highlighted.
2. Release it to see an outline.
3. Drag a corner or side to resize.

Add app shortcuts

1. Swipe up from the bottom of the home screen to open your app list.
2. Touch & hold the app you want.
3. Drag the app to an empty spot on your home screen. Or, drag it to the edge of the screen and drop it onto a new home screen panel.

Add task shortcuts

Many apps icons include shortcuts to common tasks, so you don't have to open and navigate the app.

1. Touch & hold an app icon to see available task shortcuts.
2. Do one of the following:
   - To perform the task, touch it.
   - To create a shortcut for that task, drag ═ to an empty space on your homescreen.

Here are examples of task shortcuts for various apps. Not all apps include task shortcuts.

App	Task shortcuts
Gmail	• Compose new email • Open to specific account
Maps	• Navigate to Work • Navigate to Home
YouTube	• Search • Subscriptions • Trending
Chrome	• New incognito tab • New tab
Calendar	• New reminder • New event

Messages	• Open most recent conversation • New conversation
Clock	• Start screen saver • Start stopwatch • Create new timer • Create new alarm
Settings	• Battery • Data usage • Wi-Fi

Add web page shortcuts

1. Open the **Chrome** app.
2. Navigate to the web page.
3. Touch ⋮ > **Add to Home screen**.
4. Edit the name if desired.
5. Touch **ADD**.
6. Do one of the following:
   - Touch & hold the icon to drag it where you want on the home screen.
   - Touch **Add automatically**.

Add folders

Folders organize your shortcuts.

1. Touch & hold an app shortcut on your home screen.
2. Drag it onto another to group them together, then release when a circle forms around them:

Then you can:

- **Add more apps.** Drag app icons onto the circle from your home screen or app tray.
- **Use an app in the folder.** Open the folder and touch the app's icon.
- **Name the folder.** Open the folder, then touch its name and type a new name.

- **Remove an app from the folder.** Open the folder and drag the app icon onto the home screen, or drag it up and drop it on **Remove**.
- **Delete the folder.** Touch & hold the folder, then drag it to **Remove**.

Remove widgets, shortcuts, or folders

To remove widgets or shortcuts from your home screen:

1. Touch & hold it until it vibrates.
2. Drag it to **Remove**.

To select a totally new user interface for your home screen, download a different launcher.

Remake your home screen with launchers

Get different launcher

Totally changing the look and feel of your home screen is easy to do. Just select and download a new launcher app. Switch back to the standard look and feel at any time. Launchers frequently include new sets of wallpapers, new gestures for interacting with your phone, and customizable elements for your home screen.

1. Search for “launcher” in Play Store.
2. Read through the choices and download the one (or more) that you want.
3. To start using it, open the app or follow the onscreen instructions after downloading it.

Switch between launchers

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Default apps** > **Home app**.

   Or, touch **Advanced** > **Default apps** > **Home app**.
3. Select the launcher you want to use.
4. To adjust its settings, touch ⚙.

Delete launchers

You can only delete launchers that you installed.

Touch & hold the launcher's app icon, then touch ⓘ > **Uninstall**.

Use a screen saver

Set up screen saver

While your phone is idle on a dock or charger, turn it into a desk clock, a photo frame to show off your pics, or more.

1. Go to **Settings** > **Display** > **Advanced**.
2. Touch **Screen saver**.
3. Do any of the following:
   - To change screen savers, touch **Current screen saver**, then select one. To set options for that screen saver, touch ⚙.
   - To preview your selection, touch **Start now**. Touch the screen anywhere (unlock if necessary) to return to settings.
   - To adjust when the screen saver starts (while docked, charging, or either), touch **When to start**.

Start screen saver

The screen saver automatically starts when you connect your phone to a dock or charger and the screen goes to sleep.

To exit the screen saver and return to your home or lock screen:

- Press the Power button.
- Or, if you're using fingerprint security, touch the sensor.

To manually start your screen saver any time, go to **Settings** > **Display** > **Advanced** > **Screen saver** and touch **Start now**.

Turn off screen saver

To prevent the screen saver from starting automatically:

1. Go to **Settings** > **Display** > **Advanced**.
2. Touch **Screen saver** > **When to start** > **Never**.

Add screen savers

Search for “Screen saver” in Play Store for apps that give you more.

After you install an app, you can select the new ones in **Settings** > **Display** > **Advanced** > **Screen saver**.

Set ringtones

Change default call ringtone

1. Go to **Settings** > **Sound**.
2. Touch **Phone ringtone**.
3. Do one of the following:
   - Select a ringtone from the list.
   - To use a song as the ringtone, touch **Add ringtone** at the bottom of the list. Then touch ≡ > **Audio** and select the song stored on your phone.
   - For silence, touch **None** at the top of the list.

Vibrate phone for calls

You can set the phone to vibrate when it rings for calls.

To extend battery life, turn vibrate off.

1. Go to **Settings** > **Sound**.
2. Turn **Also vibrate for calls** on or off.

Set call ringtone for a contact

You can choose a unique ringtone for calls from specific people so you'll know instantly who's calling.

1. Open the **Contacts** app.
2. Touch the contact's name.
3. Touch ⋮ > **Set ringtone**.
4. Do one of the following:
   - Select a ringtone from the list.
   - To use a song as the ringtone, touch **Add ringtone** at the bottom of the list. Then touch ≡ > **Audio** and select the song stored on your phone.
   - For silence, touch **None** at the top of the list.

Set ringtone for app notifications

You can set a default sound for notifications from apps including messaging and email. You can also set a unique ringtone for notifications from specific apps. Learn how.

Tip: To change your alarm sound, open the Clock app and touch . Then touch .

Get more ringtones

Although your phone comes with lots of ringtones, you can get more:

- Search for “ringtones” in Play Store and install an app that provide ringtones.
- Search for “ringtone maker” in Play Store and install an app that lets you create custom ringtones. Open the app and use it to select entire songs or portions of songs.
- If you have songs that are .mp3 files stored on your computer, connect your phone and computer with a USB cable, then copy the song to your phone.

Fix a problem

If you’re not hearing your ringtones, look for in your status bar, which means you're in Do Not Disturb mode. Open quick settings and touch to turn Do Not Disturb off.

Avoid interruptions with Do Not Disturb

Turn Do Not Disturb on or off manually

When you're busy, use Do Not Disturb to mute sounds, stop vibration, and block notifications.

Turn it on

1. Open quick settings and touch .

   You'll see in the status bar when Do Not Disturb is on.

2. To change how long it stays on, in quick settings, touch & hold , touch **Duration**, and then choose one:
   - To keep it on indefinitely, touch **Until you turn off**.
   - To select a duration, touch **For 1 hour**, then touch + or - to adjust the time.
   - To choose each time you turn Do Not Disturb on, touch **Ask every time**.

Turn it off

Open quick settings and touch .

If it's turning itself on again, but you don't want it to:

- Make sure you're not silencing on a schedule or during calendar events.
- If you're using Wind Down, touch **Settings** > **Digital Wellbeing & parental controls** > **Wind Down** and turn **Do Not Disturb** off .

Set overall behavior

Sound and vibration

When Do Not Disturb is on, sound and vibration are muted. Alarms and media aren't muted by default, but you can mute them too.

To adjust settings for alarms, media, and touch sounds:

1. Go to **Settings** > **Sound** > **Do Not Disturb**.
2. Touch **Sound & vibration**.
3. For each category, select whether sound and vibration is muted or not .

Notifications

When Do Not Disturb is on, you won't see or hear notifications by default. You can change settings to:

- Allow visual notifications but no sound
- Allow or prevent the screen from turning on or waking
- Show or hide notification dots, status bar icons, pop-up notifications
- Show or hide notifications from the notification list

To change how Do Not Disturb handles notifications:

1. Go to **Settings** > **Sound** > **Do Not Disturb**.
2. Touch **Notifications**.
3. Do one of the following:
   - To block sound from notifications but still see them on your screen, select **No sound from notifications**.
   - To block all visual notifications, select **No visuals or sound from notifications**.
   - To block or allow selected visual notifications, select **Custom** and turn features on or off.

If Do Not Disturb is off and you expect but aren't getting notifications from an app, check your settings for the app's notifications.

Allow exceptions

When Do Not Disturb is on, incoming calls, messages, and calendar events or reminders are muted. You can allow exceptions.

Calls

1. Go to **Settings** > **Sound** > **Do Not Disturb**.
2. Touch **Calls** > **Allow calls**.
3. Choose whether to allow calls from:
   - Anyone
   - Contacts only
   - Starred (favorite) contacts only
   - None
4. To let calls through from repeat callers (the same person calling a second time within 15 minutes), turn **Allow repeat callers** on .

Text messages

1. Go to **Settings** > **Sound** > **Do Not Disturb**.
2. Touch **Messages, events & reminders** > **Allow messages**.

3. Choose whether to allow messages from:
   - Anyone
   - Contacts only
   - Starred (favorite) contacts only
   - None

Calendar events and reminders

1. Go to **Settings** > **Sound** > **Do Not Disturb**.
2. Touch **Messages, events & reminders** and turn them on .

Silence on schedule

You can create a schedule for when your phone should automatically switch into and out of Do Not Disturb mode.

1. Open quick settings, then touch & hold .
2. Touch **Turn on automatically**.
3. Use rules to set the schedule:
   - To use an existing rule, touch its name, like **Sleeping**. Turn **Use rule** on and adjust times or settings as needed.
   - To create a new rule, touch **Add rule**. Touch **Time**, then enter a name and touch **OK**. Specify its days, start and end times, and level of silence.

To stop your phone from automatically silencing:

1. Go to **Settings** > **Sound**.
2. Touch **Do Not Disturb** > **Turn on automatically**.
3. Select the rule and turn it off or touch to delete it.

Silence during calendar events

Your phone can automatically switch into and out of Do Not Disturb mode for all scheduled events in calendars that you specify.

1. Open quick settings, then touch & hold .
2. Touch **Turn on automatically**.
3. Do one of the following:
   - To use an existing one, turn it on.
   - To create a new one, touch **Add rule**. Touch **Event rule**, then enter a name and touch **OK**.
4. Adjust options to select the calendar to use and your reply status.

To stop your phone from automatically silencing:

1. Go to **Settings** > **Sound**.
2. Touch **Do Not Disturb** > **Turn on automatically**.
3. Select the rule and turn it off or touch to delete it.

Stop phone from speaking

Some voice commands (like “What's up?” and “What is the current weather?”) cause your phone to speak in response.

To stop the phone from speaking temporarily, touch .

To prevent your phone from speaking:

1. Open the **Google** app.
2. Touch **More** > **Settings**.
3. Touch **Voice**.
4. Select an option for **Spoken results**.

Silence power on sound

If you don’t want your phone to make a sound when it powers up:

1. Go to **Settings** > **Sound** > **Advanced**.
2. Turn **Power on sounds** off .

You can't adjust the volume level for this sound.

Turn off charging sounds

If you don’t want your phone to make a sound when it comes in contact with a charger:

1. Go to **Settings** > **Sound** > **Advanced**.
2. Turn off **Charging sounds**.

Use volume booster for speaker

1. Go to **Settings** > **Sound** > **Advanced**.
2. Touch **Sound enhancement**.
3. Turn **BesLoudness** on .

About your apps

Open an app

Swipe up from the bottom of your home screen, then touch the app to open.

Preloaded apps

The following apps are preloaded on your phone. Don't want some? Delete or disable them.

Icon	App	Description
	Calculator	Make some quick calculations.
	Calendar	Keep track of your upcoming events, get automatic reminders on your phone, and coordinate with others by sharing calendars.
	Camera	Capture photos or videos. Scan QR codes and barcodes.
	Chrome	Browse the web. Access your browser bookmarks from any device, and sync tabs with your computer or Android devices.
	Clock	Set alarms. Use a timer or stopwatch.
	Contacts	Organize and connect with your contacts. Assign ringtones to people.
	Docs	Create, edit, and collaborate with others on documents.
	Drive	Store and synchronize your files on Google's cloud, then access them anywhere you have an internet connection. Create and share spreadsheets, documents, and presentations. Scan documents and share or print them.

Duo	Make video call with your friends across Android and iOS.
Facebook	Connect with friends, family, and communities. Share updates and media. Find information on events, entertainment, and businesses.
Files	Browse and manage files and folders stored on your device or SD card.
FM Radio	Listen to FM radio stations.
Gmail	Compose, send, view, or search your email from your phone or computer.
Google	Search the web, see your updates, and adjust Google settings, including privacy.
Google One	Get expanded storage, Google support, and other member benefits with a paid subscription.
Google Pay	Pay with your phone in-store or online, and send cash using this secure digital wallet.
Maps	Find your destination, explore locations.
Messages	Send and receive text messages.

Phone	Make calls.
Photos	Manage photos and upload them automatically to your private album.
Play Movies & TV	Get movies and TV shows for instant viewing from Play Store.
Play Store	Get apps for your phone, as well as books, magazines, music, and movies and access them from your computer or any Android device.
Settings	Customize your phone settings.
Sheets	Create, edit, and collaborate with others on spreadsheets.
Slides	Create, edit, collaborate with others, and play presentations.
YouTube	Find, view, and upload videos to the web.
YT Music	Stream your favorite albums, singles, and live performances, and get recommendations for new music.

Get more apps

Don't see what you need? Download more apps.

Tip: Swipe up ^ and touch **Search apps**. Type the missing app's name to go to Play Store where you can install with one touch.

Get help for an app

1. Open the app.
2. Touch ☰ or ⋮.
3. Look for **Help** or **Settings** > **Help**.

Switch between recent apps

1. Touch ▥ to see your recently used apps.
2. Do any of the following:
   - Touch any app screen to return to it.
   - Swipe left or right to see more apps.
   - Swipe an app up to remove it from the list.
   - To clear the list, swipe all the way right and touch **Clear all**.

Tips:

- Touch ▥ twice to switch between your two most recently used apps.
- Use two apps at once with split screen.

Close apps

To get out of an app, touch ● to return to your home screen.

You don't need to close apps. Android manages the memory and battery that apps use, so you don't need to worry about leaving apps open.

To remove apps from your recently used list:

1. Touch ▥.
2. Do one of the following:
   - To remove one app, swipe up to remove it from the list.
   - To remove all apps, swipe right to the end of the list and touch **Clear all**.

Tips for using apps

- You can change the background color of your app list to be light or dark.
- See how long you use each app and set app timers to improve your digital wellbeing.
- You can print from many apps.
- Copy and paste text between apps with the clipboard.
- To organize apps into groups on your home screen, use folders.

- Touch & hold an app's icon to see task shortcuts, if any. Touch a task to perform it. Or, drag ═ to your home screen to create a shortcut for that task.
- Want to turn the flashlight on or off? Use quick settings (or). No app required.
- If you're having problems with an app, try these troubleshooting steps.

Use two apps at once

Use split screen view

1. Open the first app.
2. Touch .
3. In the recent list, touch the app's icon, at the top of the app's preview, to see and .

   Be sure to touch the app's icon instead of the preview, which opens the app.
4. Touch **Split screen**.
5. Select the second app to use.

Exit split screen view

Drag the black divider all the way up or down.

Use Picture-in-picture

With some apps, you can watch video in a small, movable frame while you do other things. Use it when navigating with Google Maps, too.

1. When you're playing a video or navigating with Maps, touch .

   The video (or navigation) shrinks.
2. You can drag the video (or navigation) anywhere on the screen.
   - To return it to full size, touch it twice.
   - To close it, drag it to the bottom of the screen. Or, touch it, then touch .
   - To turn off Picture-in-picture for the app in use, touch it, then touch and turn **Allow picture-in-picture** off .

To see all apps that support Picture-in-picture:

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Advanced** > **Special app access** > **Picture-in-picture**.
3. To turn off Picture-in-picture for an app, touch it and turn **Allow picture-in-picture** off .

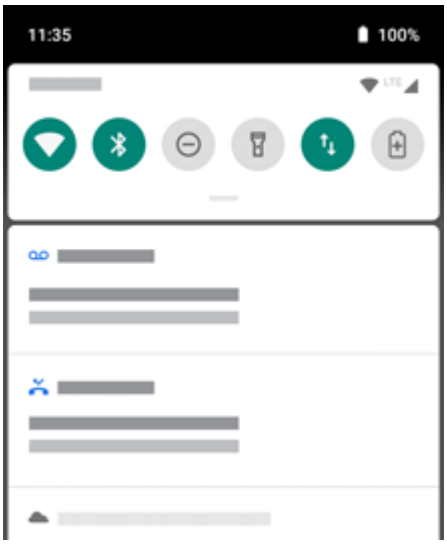
View notifications

Find your notifications

Notifications alert you about things like new messages, calendar events, and alarms.

You see notifications:

- On your lock screen
- When you swipe the status bar down on any screen



- When you touch & hold an app icon that shows a notification dot

If you receive multiple notifications from an app, they're bundled together. Swipe down to view more details.

Some important notifications pop up briefly over your current app so that you can take action. For example, a notification for an incoming call might appear while you're watching a video, so that you can answer or dismiss the call.

What you can do with notifications

- **Respond from a notification.** Many notifications include actions at the bottom that let you complete common tasks without opening the full app. If you have several notifications, these actions are hidden. When you see ⌄, touch it to reveal actions.
- **Open the app that sent the notification** Swipe down from the top of the screen and touch the notification to open the app. From your lock screen, touch the notification twice and enter your PIN, pattern, or password to unlock your screen and open the app.
- **Snooze a notification.** Swipe left or right slowly. Then touch and select a duration to snooze notifications.
- **Dismiss a notification.** Swipe it sideways.
- **Clear all notifications.** Swipe to the end of your notifications and touch **Clear all**. Some notifications, like voicemails, require an action and cannot be dismissed.

Customize your notifications

Use Do Not Disturb to silence all notifications when you don’t want interruptions.

You can also customize notifications, controlling the notification sound, which apps send notifications, how notifications show on your lock screen.

Install or update apps

Get apps from Google Play Store

Need a voice recorder, notepad, or compass? You can download more apps, in addition to the apps preloaded on your phone.

To download apps:

1. Open the **Play Store** app.
2. Browse by category or search.
3. Touch an item to see a description, read reviews, and download it.

   You'll see in the status bar when the app has downloaded and installed successfully.

Tips:

- To view Play Store apps you've installed on this phone, touch > **My apps & games**. Touch **LIBRARY** to see apps you've installed on other devices using the same Google account.
- To prevent accidental or unwanted purchases, touch > **Settings** > **Require authentication for purchases**.

Get apps from other sources

Before downloading, do some research: check the app's rating and read lots of comments.

To download apps:

1. Open the **Chrome** app and go to the appropriate site to download the app.

   If you see a warning, touch **OK** to continue.

   You'll see in the status bar when the download completes.
2. Touch the download notification to install the app. Or, open the **Files** app to install it later.
3. When installing the app, be sure to review what information the app will access. If you don't want the app to access this information, cancel the installation. For example, if you're installing an app that makes a shopping list, the app should not require access to your contacts.

Update Play Store apps automatically

Updating your apps gives you the latest features and improves security and stability. For best performance, apps are set to update automatically.

If an app changes the information it wants to access on your phone, you will receive a notification to update the app manually and will be required to review and accept the new permissions.

To control when your apps are automatically updated:

1. Open the **Play Store** app.
2. Touch > **Settings**.

3. Touch **Auto-update apps**.
4. Select whether apps should:
   - Auto-update over any network
   - Auto-update only over Wi-Fi - save data charges on your cellular plan

Update Play Store apps manually

1. Open the **Play Store** app.
2. Touch ≡ > **My apps & games**.
3. On the UPDATES tab, touch **Update all**, or to update a specific app, touch **Update** next to its name.
4. Read the summary of what changed, then swipe down to review any changes to permission details, what information on your phone the app can access. If you agree, touch **Update**.

Turn off Play Store auto-updates

To stop a specific app from updating automatically:

1. Open the **Play Store** app.
2. Touch ≡ > **My apps & games**.
3. Touch the **INSTALLED** tab, then touch the app's name.
4. Touch ⋮ and turn off **Enable auto update**.

To stop all apps from updating automatically:

1. Open the **Play Store** app.
2. Touch ≡ > **Settings**.
3. Touch **Auto-update apps** > **Don't auto-update apps**.

Restore Play Store apps

If you uninstall an app you got from Play Store, you can reinstall it anytime. Have apps you use infrequently, such as a flight tracker? Delete them and easily reinstall when needed.

1. Open the **Play Store** app.
2. Touch ≡ > **My apps & games**.
3. Touch the **LIBRARY** tab for a list of every app you’ve downloaded.
4. Next to the app name, touch **INSTALL**.
5. If you have multiple Google accounts, touch ≡ and next to your account touch ⌄. Select the other account and repeat the process to restore apps downloaded in that account.

Manage or delete apps

Organize apps

To organize apps into groups on your home screen, use folders.

Control app permissions

The first time you use an app, and sometimes when you install or update it, you are asked to grant the app permission to access certain data and phone features. You can adjust these permissions any time.

To adjust permissions by app:

1. Touch & hold the app icon, then touch ⓘ.
2. Touch **Permissions**.
3. Turn each permission on or off as needed.

> **Tip:** To see how the app uses each permission, touch ⋮ > **All permissions**.

You can also review each feature and adjust which apps have permission.

Allow apps to run in background

Performance Optimization boosts the app you're using by restricting other apps from running in the background, which may cause some notifications to be postponed or not delivered.

To allow apps to run in the background, you can turn on exceptions:

1. Go to **Settings** > **Performance Optimization**.
2. For apps you want to run in the background, turn it on ●.

> **Note:** If you notice an app you've allowed to run in the background consumes too much data, turn it off.

Use safe mode

Issues such as apps crashing, unexpected reboots, or fast battery drain could be caused by a third-party app. Use safe mode to start your phone with only the original software and apps. If the issues go away in safe mode, the problem is probably from a third-party app you downloaded.

To reboot in safe mode:

1. Press & hold the Power button.
2. Touch & hold **Power off**. Then touch **OK** to restart in safe mode.

   When it restarts, you'll see **Safe mode** across the bottom of the home screen and widgets will be disabled.
3. Use your phone and see if the problem has gone away. Remember, you won't be able to use any downloaded apps.

If the problem goes away:

1. To exit safe mode, restart your phone.
2. One by one, uninstall recently downloaded apps. After each removal, restart your phone. See whether removing that app solved the problem.
3. Once you delete the problematic app, you can restore the other apps you removed during testing.

If the problem doesn't go away: Try these troubleshooting steps for phone performance issues.

Clear app's cache or data

Clearing the cache and data can free up phone memory, improve performance, and fix some problems with apps and web pages.

1. Touch & hold the app icon, then touch ⓘ.
2. Do one of the following:
   - To free up space by removing temporary files, touch **Storage** > **Clear cache**. Over time, the cache builds up again, so repeat if a problem occurs.
   - If problems still occur, then delete all data saved in the app by touching **Storage** > **Clear storage**. Be careful - there's no way to undo this.

Force stop apps

Force stop an app only if it seems to be causing a problem. To completely shut down an app, including any background services:

1. Touch & hold the app icon, then touch ⓘ.
2. Touch **Force stop**.

Delete apps you installed

You can delete (uninstall) apps that you downloaded. For many preloaded apps, you can disable but not delete them.

1. Touch & hold the app's icon.
2. Do one of the following:
   - Drag the icon up and drop it on 🗑. This removes the app and frees storage space.
   - If you don't see a delete option, touch & hold the app icon, then touch ⓘ > **Disable**.

Delete apps installed by others

If you are the owner of the phone and share it with users or guests, you can uninstall apps they installed. Although their apps don't appear in your app tray or on your home screen, they do reduce available storage space.

1. Go to **Settings** > **Apps & notifications** > **App info**.

   Apps installed by others show the message **Not installed for this user**.
2. Touch the app name.
3. Touch ⋮ > **Uninstall for all users**.

Back up to Google

You can automatically back up the following items to your Google account:

- Apps and app data
- Call history
- Contacts
- Phone settings (including Wi-Fi passwords and permissions)
- Photos and videos (synced to your Google Photos library, not to Google Drive)
- SMS text messages (if using Messages)

Not all apps back up data automatically. Check with the app developer.

To automatically back up to Google Drive:

1. Go to **Settings** > **System**.
2. Touch **Backup**.
3. Turn **Back up to Google Drive** on .
4. If you have multiple Google accounts, touch **Account** to select an account.
5. Follow the onscreen instructions.

To back up other files that aren't automatically backed up, like attachments or downloads:

1. Open the Drive app.
2. Touch +.
3. Touch **Upload**, then choose the files or folder to upload.

Protect against harmful apps

Scan phone for harmful apps

Play Protect helps keep your phone secure by automatically scanning your phone to check for potentially harmful apps.

If Play Protect finds a potentially harmful app, it stops the app from running and warns you so you can uninstall it.

To see the results or to rescan:

1. Open the **Play Store** app.
2. Touch > **My apps & games**.
3. Do any of the following:
   - To see the results of latest scan, on the UPDATES, look at the message next to .
   - To rescan your phone, touch .

If your phone seems slow

If you've scanned your phone to confirm there aren't any potentially harmful apps but your phone seems slow, try these troubleshooting steps.

Pin your screen

Turn on screen pinning

Use screen pinning to keep the current screen or app in view until you unpin it. For example, you can pin a game and your child cannot navigate anywhere else on your phone.

You can set up a pattern, PIN, or password required to unpin the screen.

1. Go to **Settings** > **Security & location** > **Advanced** > **Screen pinning**.
2. Turn screen pinning on.
3. By default, you must always enter your pattern, PIN, or password when unpinning a screen. If you don't want this security before accessing your other phone screens, turn this option off.

Pin a screen

1. Make sure you've turned on screen pinning.
2. Open an app and go to the screen you want to pin.
3. Touch .
4. Touch the icon of what you want to pin.
5. Touch .

Unpin a screen

1. Touch & hold and at the same time.
2. If you required a pattern, PIN, or password when you turned on pinning, enter it to unlock the phone.

Search the web

Search with the widget

To type your search term:

1. Touch the Search widget.

2. Start typing a search term.

   As you type, suggested terms appear.

3. Touch a suggestion to search for it.

Search from anywhere

You don't have to leave your current app to search for the info you need. Use Google Assistant from any screen to get search results and options for your next action.

To search:

1. Say “OK, Google” or “Hey, Google”. (Be sure you've set up the launch phrase.)

   Or touch & hold .

2. Tell the assistant what you're looking for. For example, search for a local restaurant by saying “Find [restaurant name].”

3. Below the search result, touch options for related actions: make a call, get directions, read reviews, and more.

For more help with Google Assistant, read Google's support information.

Get info about your surroundings

Get information about and interact with your surroundings. Just open the Camera app and use Google Lens on the viewfinder to:

- **Search for information about objects around you:** products for purchase, landmarks and buildings, plants and animals, books and visual art
- **Scan barcodes and QR codes:** Search for related information, open a website to purchase a product
- **Digitize real-world text:** Copy text to paste in another app, translate text, save business card information to Contacts, create calendar events from dates on event posters or billboards

To use Google Lens:

1. Open the Camera app and frame the item you want to learn about.

2. Touch .

3. Touch the item you want to learn about.

   For text, touch it to select it, and use to select more.

4. In the list of results:
   - Touch a selection to see the search result or take the suggested action.
   - To look for other results, touch . For example, switch to text results or shopping results.
   - To narrow the search, touch to crop the image for closer detail.

To learn more, read Google's help.

Search from Gboard

When you're typing with the onscreen keyboard:

1. Touch above the keys.
2. Start typing a term in the search bar.
3. Touch a result to share its link, or touch one of the additional suggested searches for more information.

If you don't see on your keyboard:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Search**.
3. Turn **Show "Search and more" button** on .

Search for nearby phone numbers

To find and call a nearby business:

1. Open the **Phone** app.
2. Touch .
3. Say or type the name of place to call, or a search term about the place (for example, “restaurant”).

   You’ll see a list of nearby search results.
4. Touch the place to dial its number.

If it doesn't work:

- Make sure Location is enabled.
- Touch > > **Settings** and turn **Nearby places** on.

Delete Google search history

Read Google's help for instructions.

Use search engine other than Google

To use a search engine other than Google:

1. Search for “search engine” in Play Store and install one of the apps.
2. Open that app to search.

3. Optionally:
   - Delete the Google search widget from your home screen. If you can't delete it, use a different launcher for your home screen that doesn't include the widget.
   - Install a browser to replace Chrome and make it your default browser.
   - Turn off Google's collection of your information.

Search your phone

Search contents of your phone

1. Touch the Search widget.

2. Enter a search term.
3. On the search results page, under , swipe left and change **ALL** to **PERSONAL**.

If you're not seeing results:

1. Open the **Google** app.
2. Touch **More** > **Settings**.
3. Touch **General** > **Personal results**.
4. Make sure that everything you want to include in your searches is checked.

Find an app

1. Swipe up from the bottom of the home screen to open your app list.
2. Touch **Search apps**.
3. Type the app's name.
4. If the app is on your phone, touch its icon to open it.

   If the app isn't on your phone, touch **SEARCH FOR MORE APPS** to go to Play Store and install with one touch.

Find your phone number

1. Go to **Settings** > **System**.
2. Touch **Advanced** > **About phone** > **Phone number**.

Find photos, videos, files

To find photos or videos on your phone, use the Photos app.

To find downloaded files, use the Files app.

Browse websites

Visit and bookmark websites

Your phone connects to your carrier's cellular network or to a Wi-Fi network to access the internet. To save data charges on your cellular plan, use a Wi-Fi connection.

1. Open the **Chrome** app.
2. Go to a site by touching the bar at the top and typing the address.
3. On a web page:
   - To bookmark it, touch > ☆.

     Or, touch > **Add to Home screen** to put a shortcut on your home screen.
   - To search for text on that page, touch > **Find in page**.
   - To open a link, touch it.
   - To see options for opening a link in a new tab and copying or sharing a link, touch & hold the link.
   - To print the page, touch > **Share** > **Print**. Be sure you set up your print service.
4. To return to the previous page touch ◀.

To learn more about browsing or managing bookmarks, open Chrome and touch > **Help & Feedback**.

Open and switch browser tabs

In the **Chrome** app:

- To switch tabs, touch the switcher icon 3.
- To open a new tab, touch touch the switcher icon 3, then touch +.

Browse privately with incognito tabs

If you don't want Chrome to remember your activity, use incognito tabs.

To open a new incognito tab with one touch from your home screen, add a task shortcut:

1. Touch & hold .
2. Drag to a blank space on your home screen.

To close all incognito tabs:

1. Swipe the status bar down.
2. Touch .

Clear browsing history

1. Open the **Chrome** app.
2. Touch ⋮ > **History**.
3. Touch **CLEAR BROWSING DATA**.

You can also review and delete your search history.

Change default browser

You can download other browsers from Play Store. After you've installed one, you can make it your default browser.

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Default apps** > **Browser app**.

   Or, touch **Advanced** > **Default apps** > **Browser app**.
3. Touch the app to use.

About text and multimedia messages

Text messages - SMS

SMS (Short Message Service) messages contain text only. One text message can contain 160 characters; when you near the limit, a counter appears. If you type more, your message is sent in a series of SMS messages.

You can send one SMS message to multiple people, and replies are delivered in separate, not group, conversation threads (unless you and your recipients have group messaging enabled).

SMS messages are included in most carriers' text messaging plans and do not use cellular data.

Multimedia messages - MMS

MMS (Multimedia Messaging Service) messages can include unlimited text plus a photo, picture slideshow, video, or sound file.

You can send one MMS message to multiple people using group messaging, containing text only or text and media, and replies are delivered in group conversation threads to each person in the group.

MMS messages use cellular data and require a cellular data plan or pay-per-use payment.

Group messaging

Group messaging lets multiple people carry on a group conversation. All replies from recipients are delivered to all recipients, in a group conversation thread.

Though you send one message to multiple recipients, you are charged for each message received. Group messaging:

- Converts multiple-recipient SMS messages to MMS for all who can receive them
- Is available for MMS messages only

Note: Recipients who cannot receive MMS messages receive SMS instead and, if media is attached, a link to download it over Wi-Fi (when offered by carrier). Replies are to the sender only, in an individual conversation.

If you don’t want to receive replies in group conversations, you can turn off group messaging in the Messages app.

Read, send, manage text messages

Read and reply to a text message

When you receive a text message with the Messages app, you'll see in the status bar.

1. Swipe the status bar down and touch .

2. Do any of the following:
   - To respond to the message, enter your response in the text box and touch .
   - If the message is from an unassigned number, create a contact to associate a name with that number.
   - To open an attached photo, slideshow, or any type of attachment, touch it.
   - To save an attachment, touch & hold it, then touch .
   - To find a message, touch at the top of your message list and enter search terms.

Tips:

- If you don't want multi-recipient SMS messages converted to MMS and want replies sent in separate conversations (threads) to you only, turn off group messaging.
- To protect your privacy, you can hide sensitive content for lock screen notifications.

Send text message

1. Open the **Messages** app.
2. Touch .
3. Enter recipients, then type the message.
4. Optionally:
   - To add an attachment, touch or .
   - To add a smiley or other icons, touch on the onscreen keyboard.
5. Touch .

Tips for sending messages:

- To text your best friend with one touch from your home screen, add a task shortcut. Touch & hold and drag to your home screen.
- To change the text message reply to incoming calls, open the Phone app and touch > **Settings** > **Quick responses**.

Request text delivery reports

See whether recipients receive your messages by requesting delivery reports.

1. Open the **Messages** app.
2. Touch > **Settings**.
3. Do one of the following:
   - If you have a single SIM, touch **Advanced**.
   - If you have dual SIMs, touch the SIM.

Manage draft texts

When you begin composing a text message reply or a new message with recipients, it is saved in your message list as a draft until you send or delete it.

1. Open the message list and touch the conversation marked **Draft**.
2. Do one:
   - Finish composing the message and touch .
   - Delete the characters in the text field to delete the draft.

Forward a text message

1. Open the **Messages** app.
2. Open the conversation.
3. Touch & hold the message.
4. Touch > **Forward**.

Copy text from a message

1. Open the **Messages** app.
2. Open the conversation.
3. Touch & hold the message.
4. Touch .

You can now paste it elsewhere, like in an email you're composing.

Delete or archive texts

When you delete a message, you also delete any attached photos or videos. If you want the attachments, be sure to save them before deleting the message.

- To delete a single message, open the conversation (thread) and touch & hold the message, then touch .
- To delete or archive all messages in a conversation, touch & hold the conversation, then touch to delete or to archive.
- To delete or archive multiple conversations, touch & hold each conversation, then touch or .
- To see archived messages, touch > **Archived**.

Add attachments

Attach files to text message

You can attach saved pictures and videos, or take one right from your message that has an optimized, reduced file size.

1. Open the **Messages** app.
2. Compose a reply or a new message.
3. Do one of the following:
   - Touch to attach a photo or video or capture a new one. Touch to expand the viewfinder to fullscreen, where you can switch to a selfie camera or capture a video.
   - Touch for other types of attachments (emoji, GIF, your location, a recording).
4. Touch .

To learn more, touch > **Help & Feedback** in the Messages app.

Send contact as text message

1. Open the **Messages** app.
2. Open your conversation with that person.
3. Touch their name at the top of the conversation.
4. Touch > **Share**.
5. Touch the recipient's name, or touch **Messages** to start a new message.
6. Touch .

Fix a problem

If you're having trouble attaching files, check that:

- Cellular data is turned on.
- Your data plan supports MMS (multimedia messages).

Save attachments from text message

If you received an attachment to a text message, you can save it on your phone. In the message, just touch & hold the attachment, then touch to save it.

To view the saved attachment:

- For photos or videos, open the Photos app and touch > **Device folders** > **Messages**.
- For other attachments, open the Files app.

If you do not save a photo or video from a message, it is kept within the message only. So, if you delete the message, you also delete the attachment. (You can try to recover recently deleted messages.)

Turn group messaging on or off

Group messaging allows conversation participants to reply to all recipients in a single thread. If you do not want multi-recipient SMS messages converted to MMS and want replies sent in separate threads only to you, turn off group messaging.

This feature is not available in all countries.

To adjust the group messaging setting:

1. In the Messages app, touch > **Settings** > **Advanced**.
2. Do one of the following:
   - If you have a single SIM, touch **Advanced**.
   - If your phone allows dual SIMs, touch the SIM you use for text messaging.
3. Touch **Group messaging** and select an option.

Change default messaging app

You can download additional messaging apps from Play Store. After you've installed one, you can make it your default messaging app.

To select a different app to send and receive text (SMS) and multimedia (MMS) messages:

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Default apps** > **SMS app**.

   Or, touch **Advanced** > **Default apps** > **SMS app**.
3. Touch the app to use.

Control notifications for text messages

If you use the Messages app:

1. Open the **Messages** app.
2. Touch > **Settings**.
3. If you have dual SIMs, touch **General**.
4. Touch **Notifications** and turn notifications on or off, change the sound, and add or remove vibration.

If you use a different messaging app:

1. Touch & hold the app's icon.
2. Touch **App info** > **Notifications**.
3. Make changes.

Tip: In your phone settings, you can prevent interruptions by restricting text message notifications during hours you specify or from specific people.

Change text message reply to incoming calls

When your phone rings, you can drag towards to see a list of quick responses you can send by text message instead of answering the call.

To edit these quick responses:

1. Touch .
2. Touch > **Settings**.
3. Touch **Quick responses**.
4. Touch one of the responses to edit it.

Get text messages on your computer

Set up Messages for web

If you use the Messages app on your phone, you can see and send text messages on your computer.

Pair your computer and the Messages app on your phone by scanning a QR code:

- The QR code is unique to that computer.
- You can set up multiple computers, getting individual QR codes, but only one is active at a time.

To set up a computer:

1. Be sure your phone and computer are connected to the internet.
2. On your phone, open the **Messages** app and touch > **Messages for web**.
3. On your computer, go to https://messages.android.com. To remember this computer and stay signed in to Messages, turn the slider on .
4. Follow onscreen instructions to scan the QR code on the web page with your phone.

   Once paired, you'll see your latest conversations in your computer's browser.

See and send messages

When you have unread messages, you'll see a red notification and number of unread messages in the browser tab on your computer.

To send messages from your computer, your phone must be on and connected to the internet.

Usual carrier fees for sending text messages from your phone also apply to messages sent from your computer.

Sign out of Messages for web

If you don’t use Messages on a paired computer for 14 days, you’re automatically signed out from that computer for security reasons.

If you're using a shared or public computer, sign out when you're done.

To sign out from your phone:

1. Open the **Messages** app.
2. Touch > **Messages for web**.
3. Do one of the following:
   - Touch next to an individual computer to sign out of it.
   - Touch **Sign out of all computers**.

To sign out from the computer, at the top of the message list, click .

Read, send, manage emails

Read email

If you've set up email, you'll start receiving emails after your account syncs with your phone. When you receive an email notification, you'll see in the status bar.

1. To open email from a notification, swipe the status bar down and touch the notification:
   - A single email notification opens the message directly.
   - A multiple email notification opens the email list; touch an email to open it.

   If you dismiss the notification and want to view the email later, open the **Gmail** app.
2. Do any of the following:
   - To view other folders, touch from your email list.
   - Attachments appear at the end of the email. You can view or save them.
   - You can print emails from your phone.

Reply to or forward an email

1. Touch to reply to the sender. Or, swipe to the end of the email and touch to reply to all recipients or to forward.
2. Enter your message.
3. To copy someone on the email, in the To field, touch .
4. Touch .

Send new email

1. Open the **Gmail** app and touch .

   Or, touch & hold , then touch **Compose**. (If you send lots of emails, add a task shortcut. Drag **Compose** to your home screen.)
2. Enter the recipient and your message.
3. To copy someone on the email, in the To field, touch .
4. Touch .

Add attachment to email

1. In the email you're composing, touch > **Attach file**.
2. Browse to the file, and touch it to add it to the email. The attachment appears at the bottom of the email.

Find emails

When you open the Gmail app, you see your Inbox.

To view sent email, drafts, recently deleted email, and other categories, touch ☰.

To search for emails, at the top of your email list enter terms, like the topic or the sender's name.

Delete emails

To delete an open email, touch 🗑.

To delete multiple emails, go to your email list, touch & hold each message to delete, then touch 🗑.

To delete large quantities of email, sign into your email account on your computer, and see your email provider's help for more information.

Tips:

- To delete attachments that you saved from emails, use the Files app.
- You can also remove email accounts from your phone.

Learn more

For more help with Gmail, read Google's support information.

For help managing email from other providers, sign into your email account on your computer and look for the provider's instructions.

View email attachments

View attachments

Attachments appear at the end of an email.

To view or play the attachment, touch it.

If you see a message that you can't open the attachment type, most file types have a free viewer that you can use. In Play Store, search for the file type, then select and download an app.

Save attachments from email

In the email, touch ⬇ to download and save it on your phone, or touch △ to save it in Drive.

To view attachments later, open the **Files** app (go to Download) or the **Drive** app.

Delete attachments saved from email

1. Open the **Files** app.
2. Touch **Browse** > **Downloads**.

3. Do one of the following:
   - To select one item, touch & hold it.
   - To select multiple items, touch & hold the first one, then touch the others.
4. Touch .

Prevent previews of attachments

Attached photos or videos appear as thumbnails, showing a preview.

To see a generic thumbnail instead of a preview thumbnail until you open the file:

1. Open the **Gmail** app.
2. Touch > **Settings**, then touch the account name.
3. Touch **Images** > **Ask before displaying external images**.

Preview inboxes from home screen

To preview your inboxes, open emails, or quickly start a new email, add the Gmail widget to your home screen.

With the widget, you can:

- **Open a message.** Touch the message.
- **Compose a message.** Touch .
- **View more messages.** Scroll down the list.
- **Open the app.** Touch the folder name at the top of the widget.

Add email signature

To add a signature automatically to the end of emails you send:

1. Open the **Gmail** app.
2. Touch > **Settings**.
3. Select the account.
4. Touch **Mobile Signature** and edit the text you want to appear at the end of every email.

Control email notifications

You can control whether you see notifications when you receive an email.

1. Touch & hold .
2. Touch > **Notifications**.
3. Adjust notification settings.

Tip: To automatically silence notifications during hours you specify, use Do Not Disturb.

About the calendar

Keep track of upcoming events and get automatic reminders on your phone with your calendar. Google calendars let you save all your events in one place, which is secure, synced, and accessible from any web-enabled device or computer when you've signed in to your account.

You can:

- Review existing events.
- Create new events.
- Control notifications for events.

Your calendar can automatically create new events based on your incoming Gmail messages. For example, if you make restaurant reservations or book a flight, these events will show up automatically on your calendar; you don't have to add them.

If you created multiple calendars within your Google account, or if you have multiple Google accounts on your phone, you can control which events are synced with your phone.

Find calendar events

Open calendar events

You'll see in the status bar to alert you of upcoming events. Just swipe the status bar down and touch the notification to see the event details in your calendar.

To see your list of upcoming events, open the Calendar app.

Tip: For an overview of your upcoming events from your home screen, add a Calendar widget.

Get around the calendar

To glance at the month view:

1. Touch the month's name.
2. Touch a date to jump to it and see its events.

To change the view:

1. In your calendar, touch .
2. Touch **Schedule**, **Day**, **3 Day**, **Week** or **Month**. This view remains the default until you change it.

From these views, you can:

- **Read or edit event details.** Touch the event to open it and touch to edit it.
- **Add new events.** Touch .
- **Search your calendar.** Touch > **Search**.

Create and manage events

Create calendar events

As you're creating an event, you'll see suggestions for the event titles, locations, people, and more. In some cases, these suggestions are personalized based on information associated with your Google account and your previously created events.

1. Open the **Calendar** app and touch > **Event**.

   Or, touch & hold , then touch **New event**. (If you create lots of events, add a task shortcut. Drag **New event** to your home screen.)

2. Touch the account name to associate the event with the calendar you want.
3. Enter the start time and other details.
4. If you want a reminder sent to your status bar, touch **Add another notification** and select how long before the event you want a reminder.
5. Touch **Save**.

Edit or delete calendar events

1. Touch an event to open it.
2. Do any of the following:
   - To edit it, touch .
   - To delete it, touch > **Delete**.

Control which events are shown

To temporarily hide calendar events for a Google account you don't need to see all the time:

1. Open the **Calendar** app and touch .
2. Beneath the account name, touch **Events**. If you have multiple calendars for that account, touch the name of each calendar to hide its events.

> **Tip:** When you hide events, the calendar still syncs with your Google account. To prevent that account's calendar from automatically syncing, from the home screen go to **Settings** > **Accounts**.

To exclude automatically-generated events created from Gmail (for events such as flight bookings and restaurant reservations):

1. Touch > **Settings** > **Events from Gmail**.
2. Under the name of the account, turn off **Events from Gmail**.

To learn more, open Calendar and touch > **Help & Feedback**.

Control notifications for calendar events

1. Touch & hold the 31 app icon.
2. Touch ⓘ > **Notifications**.
3. Adjust notification settings.

If you have assigned a ringtone for the notification but you silence your phone, your phone won't play the ringtone.

Tip: To automatically silence notifications during hours you specify, use Do Not Disturb.

Set alarms

Set alarm by touch

1. Open the **Clock** app.
2. Touch .
3. Adjust alarms:
   - To create a new alarm, touch .
   - To use an existing alarm, switch it on.
   - To change an alarm's sound, schedule or label, touch .
4. To control general alarm settings, like alarm volume and snooze duration, touch > **Settings**.

Set alarm by voice

1. If you've set up **Voice Match**, say “OK, Google”. Or, touch on the Google Search widget.

2. When prompted to speak, say your command. For example: “Set alarm for 7:45 p.m., label, switch the laundry” or “Wake me up at 7 a.m. tomorrow.”

   Your phone sets the alarm and provides a confirmation.

When an alarm is set

You'll see in the status bar and on your lock screen.

To adjust it, open quick settings and touch the alarm time.

Delete an alarm

1. Open the **Clock** app.
2. Touch
3. Touch > .

Use timer or stopwatch

Use timers

You can set multiple countdown timers with labels to keep track:

1. In the Clock app, touch for the Timer tab.
2. Enter the time to count down.
3. Touch .
4. Do any of the following:
   - To pause the countdown, touch .
   - To add a label to the timer, touch **Label** (helpful when using multiple timers).
   - To add a minute to the countdown, touch **+ 1:00**.
   - To reset the counter to the original time, touch > **Reset**.
   - To add a timer, touch **Add timer**.
   - To delete a timer, touch **Delete**.
   - To change the timer's sound, touch > **Settings** > **Timer sound**.
   - If you leave this app, quickly return to it by swiping the status bar down with one finger to see the timer notification and remaining time. To open the timer, touch the notification.

Tip: If you use timers frequently, create a task shortcut. Touch & hold , then drag **Create new timer** to your home screen.

Use a stopwatch

Record your time and share your results.

1. In the Clock app, touch for the Stopwatch tab.
2. Touch .
3. Do any of the following:
   - To pause the stopwatch, touch .
   - To record laps (or multiple durations) while the stopwatch is running, touch **Lap**.
   - To reset the counter to zero, touch > **Reset**.
   - To share your times with others or send them to yourself, touch > **Share**.
   - If you leave this app, quickly return to it by swiping the status bar down with one finger and touching a control. To open the stopwatch, touch the notification.

Tip: If you use stopwatches frequently, create a task shortcut. Touch & hold , then drag **Start stopwatch** to your home screen.

Set date and time

Change time format

1. Go to Settings > **System** > **Date & time**.
2. To change how times are displayed:
   - To use military time such as 13:00, turn **Use 24-hour format** on .
   - To use 12-hour format such as 1:00 PM, turn **Use 24-hour format** off .

Set date and time automatically

1. Go to Settings > **System** > **Date & time**.
2. Turn on **Automatic date & time** and **Automatic time zone**.

Your phone automatically syncs with the local time (using the mobile network). The local time is used for alarms and is displayed on the lock screen and other displays.

Set date and time manually

1. Go to Settings > **System** > **Date & time**.
2. Turn off **Automatic date & time**.
3. To make corrections, touch **Set date** and **Set time**.

Switch time zones

1. Go to Settings > **Date & time**.
2. Turn off **Automatic time zone**.
3. Touch **Select time zone**. Then choose a regional time zone (which is applied to the current time).

Show multiple time zones

You can view multiple time zones in the Clock app, so you can coordinate plans with friends and co-workers in other cities, or stay in touch with family back home when you're traveling.

1. Open the **Clock** app and touch .
2. To add time zones, touch , then select cities in the time zone you want to view.

Show home time zone

When traveling, you can view your home time zone in the Clock app.

1. Open the **Clock** app and touch .
2. Touch > **Settings** > **Automatic home clock**.
3. Touch **Home time zone**, then select your home time zone.

Answer calls

Answer incoming call

When you receive a phone call, the Incoming call screen shows the caller ID. If you miss a call, you'll see in the status bar.

To answer an incoming call:

- On the Incoming call screen, touch **Answer**.
- On the lock screen, swipe up to answer a voice call, or swipe the caller's icon/picture up to answer a video call.

During a call, you can use the keypad to enter numbers or codes, use speakerphone or a paired Bluetooth device, and add other people to the call. Learn more.

Tip: You can save a recent call as a contact.

Auto answer on headset

You can set your phone to automatically answer calls after 2, 5, or 10 seconds when you're using a headset (wired or Bluetooth).

1. Touch .
2. Touch > **Settings**.
3. Do one of the following:
   - If your phone has one SIM card, touch **Calls**.
   - If your phone has dual SIMs, touch **Calling accounts** and select the SIM.
4. Touch **Auto answer on headset** and select a duration.

Dismiss incoming call

If you don't want to talk to the caller, you can:

- **Divert the call to voicemail.** On the Incoming call screen, touch **Dismiss**. Or, on the lock screen, press the Power button. You can also automatically divert all calls from a specified number to voicemail.
- **Respond with a text message.** On the lock screen, swipe up. You can customize these default messages.
- **Block all calls from that number.**

Control ringtones and notifications

You can:

- **Quickly silence the ringer.** Press Volume Down on the side of the phone.
- **Silence ringtones during hours you specify.** Use Do Not Disturb.

- **Choose a unique ringtone for specific people.** You'll know instantly who's calling.
- **Get notified of incoming calls when you're on a call.** Set up call waiting.
- **Set the number of rings before sending a call to voicemail.** Dial into voicemail, then follow your carrier's prompts to change this setting.

Fix a problem

If your phone isn't ringing for incoming calls, look for in your status bar. Open quick settings and touch to turn Do Not Disturb off. Your phone will ring for incoming calls. Check your settings to make sure your phone is screening calls at the appropriate times.

If you're having other problems, try these troubleshooting steps.

Make calls

Make a call

1. Touch .
2. Touch and enter a number.
3. If you enter a wrong number, touch .
4. Touch to call the number.
5. To hang up, touch .

Other ways to make calls

You can place calls from:

- The Phone app
- The Contacts app
- Other apps that show contact information. Wherever you see a phone number, you can usually touch it to dial.

In the Phone app, you can place calls in several ways.

To	Do this
Dial a number	Touch , enter a number and touch . If you enter a wrong number, touch .
Dial by voice	Touch and say a name or number. (If you don't see , swipe down to close the dialer.) Or, skip the Phone app entirely and say a voice command.

Call by name	Start typing the name in the search box. You'll see a list of matches. Just touch one to call. (If you don't see , swipe down to close the dialer.) Or, to see your contact list, touch . Swipe through and touch the person to call.
Call a favorite	Touch the tab.
Call nearby place	Touch and say or type the name, then touch the search result to place the call. Learn more.
Return call	Touch , then touch next to the number.

Tips:

- To call frequent numbers with one touch from your home screen, add a Direct dial widget.
- You can save a recent call as a contact.

Change default calling app

You can download additional calling apps from Play Store. After you've installed one, you can make it your default calling app.

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Default apps** > **Phone app**.

   Or, touch **Advanced** > **Default apps** > **Phone app**.
3. Touch the app to use.

Fix a problem

To change your caller ID information seen by people receiving your calls, contact your carrier.

If you're having other problems, try these troubleshooting steps.

During a call

Adjust sound during call

While listening, you can:

- **Adjust the volume.** Use the Volume button on the side of the phone.
- **Use speaker.** Touch .
- **Use a paired Bluetooth device.** Touch to use or stop using the device.

- **Mute your microphone.** Touch . You can hear the caller but they can't hear you.

Enter a number

Touch on the call screen to use the numeric keypad.

Use other apps

When you hold your phone to your ear, the screen goes dark to avoid accidental touches. To wake it up, move it away from your ear or press the Power button.

To hide the call and use other apps, touch .

To return to the call, swipe the status bar down and touch **Ongoing call**.

Answer call waiting

If call waiting is active and a new call comes in, you can answer it. Touch **Hold and Answer Voice**. The first call is put on hold.

To switch between calls, touch .

To merge the calls, touch .

End the call

Touch on the call screen.

Or, swipe down from the top of any other screen to view the call notification and touch **Hang up**.

Make video calls

Make video call with Duo app

Duo lets you video call anyone in your contact list who also uses Duo. Android users can get it from Play Store, and iPhone users can download it from the iTunes App Store. The video calls are secure and can't be seen by others.

To get started, open the Duo app and follow the onscreen instructions to set it up.

For more information, touch > **Help & Feedback**.

Get an app to make video calls

There are many video calling apps to choose from on Play Store (like WhatsApp, Skype, and more).

1. Open the **Play Store** app.
2. Search for "video calls".
3. Download the app you want to use.

Make conference calls

To make a conference call:

1. Call the first person.
2. To call the next person:
   a. Touch .

      This puts the first call on hold.

   b. Enter the number.
   c. Touch .
3. To join the calls after the second person answers, touch .

Make calls over Wi-Fi

You can make calls and receive text messages over the internet instead of the cellular network in places where there is no cellular coverage or the signal is low.

Set phone for Wi-Fi calling

1. Touch .
2. Touch > **Settings**.
3. Do one of the following:
   - If your phone has one SIM card, touch **Calls**.
   - If your phone has dual SIMs, touch **Calling accounts** and select the SIM.
4. Touch **Wi-Fi calling** and turn it on.
5. Follow the onscreen instructions to complete the setup.
6. Make or receive calls as usual.

Block calls and texts

About blocking

If you don't want to get calls or texts from a certain phone number, you can block it. When the number tries to contact you, your phone declines automatically.

Block a number

Use either app to block both calls and texts from a number.

From the Phone app:

1. Touch .
2. Touch & hold a call from the number to block.
3. Touch **Block/report spam**.

From the Messages app:

1. Touch & hold the conversation thread from the number to block.
2. Touch .
3. Touch **OK**.

Unblock a number

From the Phone app:

1. Touch > **Settings** > **Blocked numbers**.
2. Touch by the number to unblock.

From the Messages app:

1. Touch > **Blocked contacts**.
2. Touch by the number to unblock.
3. Touch **UNBLOCK**.

Turn on call waiting

When you're on a call and a new call comes in, the new call is sent to voicemail. If you want to be notified of new calls instead, turn on call waiting.

Note: Some carriers automatically control call waiting. If you do not see this option on your phone, contact your carrier for more information.

1. Touch .
2. Touch > **Settings**.
3. Do one of the following:
   - If your phone has one SIM card, touch **Calls**.
   - If your phone has dual SIMs, touch **Calling accounts** and select the SIM.
4. Touch **Additional settings**, then check **Call waiting**.

When call waiting is on, if you're on a call and a new call comes in, you can answer it. The first call is put on hold. Touch to merge the two calls.

View and delete call history

See your call history

To see all recent calls:

1. Touch .
2. Touch .
3. You'll see one or more of these icons next to each call:

Icon	Meaning
↙	Missed call (incoming)
↙	Call you answered (incoming)
↗	Call you made (outgoing)

4. To learn more about a call, touch it, then touch **Call details**.

To see only your missed calls:

1. Touch .
2. Touch > **Call history**.
3. Touch **Missed**.

Save recent call as contact

You can save a number to make it easy to find and call back later.

To save a number:

1. Touch .
2. Touch .
3. Touch the number.
4. Do one of the following:
   - To add to an existing contact, touch **Add to a contact**.
   - To set up a new contact, touch **Create new contact**. Add contact details.
5. Touch or **Save**.

Delete calls from history

Caution: There's no way to restore the history after you delete it.

To delete one call:

1. Touch .
2. Touch .
3. Touch the number.
4. Touch **Call details**.
5. Touch .

To delete all calls:

1. Touch .
2. Touch > **Call history**.
3. Touch > **Clear call history**.

Make emergency call from locked phone

In an emergency, you don't need to unlock your phone to dial an emergency number (for example, 911 in the US or 112 in Europe).

To dial an emergency number from a locked screen:

1. Swipe up on the lock screen.
2. Touch **Emergency** to see the dialer.
3. Enter the emergency number for your region and touch .

When you make an emergency call, Android Emergency Location Service (ELS) automatically sends your location to emergency responders.

Add contacts

Add contacts automatically

When you add an account, such as Google or email, to your phone, the contacts for that account are available on your phone automatically.

Add contact with Contacts app

1. Open the **Contacts** app.
2. Touch .
3. The account that will be synced with your new contact appears at the top. To change accounts, touch .
4. Touch a text box to type the name and details. Fill in as much or as little information as you'd like.

   Tips:

   - To add a photo, touch . Choose a photo you've saved, or take a photo and crop it.
   - You can assign a custom ringtone for calls from that contact.
   - If you have multiple accounts on your phone and want to change the default account for new contacts, go to **Contacts** > > **Settings** > **Default account for new contacts**.
5. Touch **Save**.

Add contact from text message

You can easily create a new contact or add a new number for an existing contact when you receive a text message from an unassigned number.

1. Open the **Messages** app.
2. In the message list, touch & hold the number, then touch .
3. Touch **Add Contact**.
4. Do one of the following:
   - To add to an existing contact, start typing the contact's name in the search field, then select it.
   - To set up a new contact, touch **Create new contact** and add contact details.
5. Touch or **Save**.

Other ways to add contacts

- Save a recent call as a contact.
- Have someone send you a name card.
- Scan business cards or QR codes.

Edit or delete contacts

Edit contacts

After creating a contact, you can change the name, photo, and other contact information.

1. Open the **Contacts** app.
2. Touch the person's name.
3. Adjust settings as needed:
   - To assign a custom ringtone, touch > **Set ringtone**.
   - To send calls directly to voicemail, touch > **Route to voicemail**. You can also block calls.
   - To edit contact info, touch , then touch a field to make changes, touch to change the photo, or touch > **Discard** to undo changes.

Merge contacts

If you have two contacts for the same person, you can merge the information (including all emails and phone numbers) into a single listing.

1. Open the **Contacts** app.
2. Touch & hold the primary contact to merge.

   By default, this contact's name is used for the new listing.
3. Touch the second contact.
4. Touch > **Link**.

Tip: You can edit the primary contact name (for the merged listing), or delete or change other contact information as needed.

Delete contacts

You can delete contacts created and stored on your phone. If the contact is synced from a social network account, you need to delete the contact in that account. For example, a Facebook contact must be deleted from within your Facebook account. Or, hide Facebook contacts on your phone by filtering your contact list.

To delete one contact:

1. Open the **Contacts** app.
2. Touch the person's name.
3. Touch > **Delete** and confirm the deletion.

To delete multiple contacts:

1. Open the **Contacts** app.
2. In your contact list, touch & hold the first contact.

3. Touch the other contacts to delete.
4. Touch .

Star your favorite contacts

Contacts you mark as favorites appear at the top of the list in the Contacts app and on the tab in the Phone app.

To add someone to your favorites:

1. Touch the contact icon (photo or other icon).
2. Touch .

Sort contacts

Sort contacts in Contacts app

1. Open the **Contacts** app.
2. Touch > **Settings**.
3. Set options:
   - To sort by first or last name, touch **Sort by**.
   - To list names with first name first or last name first, touch **Name format**.

Sort contacts in Phone app

1. Open the **Phone** app.
2. Touch > **Settings** > **Display options**.
3. Set options:
   - To sort by first or last name, touch **Sort by**.
   - To list names with first name first or last name first, touch **Name format**.

Narrow which contacts are shown

In the Contacts app, you can narrow which contacts are shown. These changes don't affect which contacts are shown in the Phone app.

In the **Contacts** app:

- To show contacts from only one account, touch and select the account.
- To show contacts from all accounts, touch > **Settings** > **Contacts to display** > **All contacts**.

In the **Phone** app, use the tab to see only contacts you call frequently or have starred as favorites. To remove contacts from this tab, touch on the contact, then touch .

Share contacts

Ways to share contacts

You can share one or all contacts with someone by sending a name card file (.vcf).

You can also share a contact's information as a text message attachment.

Share one or a few contacts

1. Open the **Contacts** app.
2. Touch & hold a name to select it, then touch others to select more.
3. Touch .
4. Select the way to share.

Export all contacts

1. Open the **Contacts** app.
2. Touch > **Settings** > **Export**.
3. If you use more than one account, select the account.
4. Touch **Export to .vcf file**.
5. Touch **SAVE** to save it in your Downloads folder.
6. Open the **Files** app.
7. Go to **Downloads**.
8. Touch & hold the file.
9. Touch .
10. Select the way to share.

Receive a name card file

1. When someone sends you a name card file, you'll see a file transfer notification. Touch the notification and accept the file transfer.
2. Touch the name card file (.vcf) to open it and add the person to your contacts.

Use voicemail

Listen to voicemail

If you've set up voicemail, you'll see in the status bar when a new voicemail message arrives.

1. Do one of the following:
   - Swipe the status bar down and touch .
   - Or, touch , then touch & hold 1.
2. When connected, follow your carrier's system prompts.

If you listen to a new message and disconnect from voicemail without saving or deleting it, you will still see in the status bar.

Manage your mailbox

Your carrier provides your voicemail system.

1. Do one of the following:
   - Swipe the status bar down and touch .
   - Or, touch , then touch & hold .
2. When connected, follow the prompts to manage your messages and mailbox.

Contact your carrier for help with:

- Recovering or resetting your password/PIN for voicemail
- Replaying messages
- Saving, forwarding, or deleting messages
- Replying with or sending voice messages
- Changing number of rings before connecting call to voicemail
- Changing greeting or recorded name
- Changing notification options
- Changing mailbox language

Fix a problem

If remains in your status bar after you listen to your voicemails, try the following.

First, force stop the app:

1. Touch & hold .
2. Touch .

3. Touch **Force stop**.

   This restarts the app and should remove the notification.

If that doesn't help:

1. Call yourself from another phone and leave a short message.
2. Go into to your voicemail and delete this message, but wait to hang up until the notification icon has disappeared from your status bar.

Send all calls from contact to voicemail

To send all calls from a certain person to voicemail:

1. Open the **Contacts** app.
2. Touch the contact's icon.
3. Touch > **Route to voicemail**.

Tip: You can also block all calls and text messages from a number.

Take photos

Open the camera

Do any of the following:

- Touch .
- Press the Power button twice quickly.
- From the lock screen, swipe left.

Take a photo

1. If needed, adjust settings such as flash or photo size.
2. Frame your subject:
   - To zoom, pinch in or out.
   - To set focus location, touch the viewfinder where you want the focus.
   - To change the exposure, touch the viewfinder then slide to the desired exposure.
3. To take the photo, do one of the following:
   - Touch or press a Volume button.
   - Touch & hold to take a rapid series of photos. Or, press & hold a Volume button.
   - Touch > **Timer** for a timer.

   Tip: To touch anywhere on the screen instead of using , touch **Settings** and turn on **Touch Capture**.
4. To review your photos and videos, touch thumbnail at bottom left. Then:
   - To view all thumbnails, touch the screen, then touch to open the Photos app.
   - To view photos later, open the Photos app or other photo app you installed.

Take a selfie

1. On the viewfinder, touch to switch to the front camera.
2. If needed, adjust the beauty filter.
3. To take the photo, do one of the following:
   - Touch .
   - Touch > **Timer** for a timer.

Take a panoramic photo

1. On the viewfinder, touch .
2. Frame one side of the scene.
3. Touch , then slowly pan horizontally or vertically across the scene. Keep your motion smooth and use a steady speed.
4. When you reach the end of your scene, touch .

Take photo with adjustable focus (bokeh)

Keep the subject of your photo in focus and blur the surrounding scene as little or much as you like.

1. On the viewfinder, touch .
2. Be sure you're within 1.5 meters (5 feet) of your subject. It's best if nothing is in the way and the subject stands out.
3. Move the focus ring to your subject.
4. Increase or decrease blur around the subject.

5. Touch .

Share a photo you've just taken

1. Touch the photo's thumbnail, to the left of .
2. Touch .
3. Select the way you want to share.

You can also:

- Share multiple photos at once.
- Copy photos to your computer.
- Display your photos on an HDTV.
- Print photos from your phone.

Fix a problem

If you're having problems, try these troubleshooting steps.

Take screenshots

Capture screen with phone keys

1. Press & hold the Power button, then touch **Screenshot**.

   When the screenshot is captured, you'll see in the status bar.

2. Swipe the status bar down, and on the screenshot notification:
   - To share the screenshot, touch **Share** and select the way you want to share.
   - To crop or adjust image settings, touch **Edit**.
   - To delete the screenshot, touch **Delete**.
   - To open the screenshot, touch the notification.

Find screenshots later

Open the Photos app and touch > **Device folders** > **Screenshots**.

Record videos

Record a video

1. Touch .
2. Touch to switch to video mode.
3. If needed, turn the light on by touching . To change other settings, touch and turn options on or off.
4. To start, touch . Or, press a Volume button.
5. While recording, you can:
   - Take a photo during your video by touching .
   - Pause recording by touching .
6. To stop, touch . Or, press a Volume button.

Share a video you've just taken

1. Swipe the viewfinder screen to the left, and touch the video to share.
2. Touch .
3. Select the way you want to share.

You can also:

- Copy videos to your computer using a USB cable.

- Display your videos on an HDTV.

Fix a problem

If you're having problems, try these troubleshooting steps.

Adjust photography settings

Before you take a photo, you can adjust settings to get the best photo for your situation.

Use a timer

Tip: Use a tabletop tripod to stabilize the phone when taking timed shots.

1. If you're taking a selfie, touch .
2. Touch > **Timer**, then select number of seconds.
3. Frame your shot, and when you're ready, touch to start the countdown.
4. Take your place in the shot (if you're taking a selfie, simply wait) and smile!

Use a flash

To set the flash mode (off, always on, or auto), touch on the viewfinder.

Use a grid for framing

Enable a grid in your viewfinder to better frame your shots and check your camera tilt.

1. On the viewfinder, touch **Settings**.
2. Turn **Assistive grid** on .

To get rid of grid lines, turn **Assistive grid** off .

Use HDR in high-contrast lighting

Taking a photo of a bright scene that also includes dark shadows? Use HDR (High Dynamic Range) mode. The camera captures multiple exposure levels and combines them into a single photo for vibrant colors and more detail in both light and dark areas.

To set HDR mode (off, always on, or auto mode), touch on the viewfinder.

HDR is best for:

- Landscapes with bright sky and shaded hills or foliage
- Outdoor portraits with lots of contrast
- Backlit scenes with dark shadows and streams of sunlight
- When both the camera and subject are stationary

Do **not** use HDR for:

- Action shots
- Low-light indoor photos
- When you want to use the flash or the front camera

When the camera detects a high contrast scene, it automatically goes into HDR mode, and HDR appears in the viewfinder. Consider whether HDR mode would improve the photo or not.

Use anti-flicker

To prevent horizontal or vertical lines (banding) on your photos and flickering in your videos, change the anti-flicker setting. You may notice flickering when you use the camera under fluorescent light or when you capture a TV screen. It occurs when the camera's frame rate differs from the frequency of the electrical grid of your current region. North America and a few other regions use 60Hz, while the rest of the world uses 50Hz.

Your camera is set to auto, but if you experience issues, change the setting:

1. On the viewfinder, touch > **Anti-flicker**.
2. Select a frequency.

Use beauty filter

Your camera includes a filter that can:

- Soften and even skin tone
- Brighten face
- Add a rosy tone

To use the filter:

1. On the viewfinder, touch .
2. Use the slider to adjust the intensity of the filter.
3. Smile and touch to take the picture.

Adjust photo size

Lower resolution photos and videos take up less space, but have lower image quality.

1. On the viewfinder, touch **Settings**.
2. Touch **Photo size**.
3. Select size to use for new photos:
    - To display pictures that fill your HDTV or widescreen monitor without cropping, use 16:9 widescreen mode.
    - To print 5"x7" or 8"x10" photos, use 4:3 standard mode.
    - In general, use smaller file sizes (MP) for photos you'll share; use larger sizes for photos you'll print or edit.

Tip: If you're running low on internal storage, adjust settings to save new photos on your SD card.

Fix a problem

If you're having problems, try these troubleshooting steps.

Adjust other camera settings

Store photos and videos on SD card

To set your camera to save new photos and videos on your SD card:

1. Be sure you inserted an SD card.
2. On the viewfinder, touch ⚙.
3. Touch **Storage Location** > **SD card**.

You can also move existing photos and videos from internal storage to the SD card.

Use location tags

When you take photos or videos, you can embed data about the location where you took them.

On the viewfinder, touch ⚙ **Settings** and turn **GPS location info** on.

You need to turn on location-based services to use this feature.

Turn shutter sound on/off

On the viewfinder, touch ⚙ **Settings** and turn **Capture sound** on or off.

Open camera with Power button

Don't miss a shot! Open your camera from any screen, even your lock screen. Just press the Power button twice quickly. Your viewfinder opens, and you're ready to shoot.

If you don't want others to access your camera, you can turn this gesture off. But if you use a screen lock, don't worry--only your Camera app is accessible. To view existing photos or access other apps, you must unlock your phone.

To adjust whether the Power button opens the camera:

1. Go to **Settings** > **System** > **Gestures**.
2. Touch **Jump to camera** and turn it on.

Use Volume key for shutter

1. On the viewfinder, touch ⚙ **Settings**.
2. Turn **Volume key** on or off to adjust whether pressing the Volume key takes a photo/video or not.

Delete photos and videos

You can delete photos and videos:

- Just from your phone's storage.
- From both your phone's storage and your Google account backup

Tip: Keep the photos but free your phone storage. You can schedule automatic deletion of photos from your phone if they're backed up to your Google account.

From the Camera app

1. Touch the photo thumbnail (right of).
2. Do one of the following:
   - To delete it from your phone's storage and your Google account backup, touch . (If you don't see the icon, touch the screen first.)
   - To delete it only from your phone's storage, touch > **Delete from device**.

From the Photos app

1. From the list of thumbnail photos:
   - To select one item, touch & hold it.
   - To select multiple items, touch & hold the first one, then touch the others.
2. Do one of the following:
   - To delete it from your phone's storage and your Google account backup, touch .
   - To delete it only from your phone's storage, touch > **Delete from device**.

Recover deleted photos and videos

If you automatically back up photos to your Google account, you have some time to recover deleted items. When you delete a photo or video, it's moved to the Trash in the Photos app for several weeks, before being deleted forever.

To recover a photo or video:

1. Open the **Photos** app.
2. Touch > **Trash**.
3. Touch & hold the photo or video.
4. Touch **Restore**.

If you don't back up photos to your Google account, to maximize use of your phone's internal storage space, there's no undo. Once you delete something from your phone's storage, it's gone. You can try using a third-party app to recover recently deleted photos or videos.

Fix a problem

If you're having problems, try these troubleshooting steps.

Edit photos and videos

Edit photos

1. Open the photo in the **Camera** or **Photos** apps.
2. Touch the photo, then touch .
3. Touch a tab to access editing options.

Tab	Editing options
	Add a filter.
	Adjust light, color, sharpness, and more.
	Crop or rotate photo.
	Draw on the photo.
	Crop photo of a document to its exact edges and straighten them. Touch > .

4. While editing an image, you can:
   - Undo your last change. Touch > **Undo edits**.
   - Save a copy to preserve current changes. Touch > **Save copy**.
5. When finished, touch **Save**.

Edit videos

1. Open the **Photos** app.
2. Touch the thumbnail to open the video, then touch .

3. Do any of the following:
    - Trim the video. Drag the sliders to outline the frames to save.
    - Change orientation for playing the video. Touch **Rotate**.
    - Steady a shaky recording. Touch **Stabilize**.
4. Touch **SAVE**.

Find photos and videos

Photos/videos you took

To search for photos or videos:

1. Open the **Photos** app.
2. In the search box, type a search term, such as a location or person's name.

Make sure back up and sync is on. You can only search backed up photos.

To browse for photos or videos:

1. Open the **Photos** app.
2. Do one of the following:
   - To scroll through photos and videos by date, touch **Photos**.
   - To view photos and videos stored on your phone, touch > **Device folders**.
3. Touch a thumbnail to open the photo or video.

To learn more, touch > **Help & Feedback** in the Photos app.

Photos/videos from text messages

To find photos you've saved from text messages:

1. Open the **Photos** app.
2. Touch **Albums**.
3. Touch the name of your messaging app. (Swipe left if needed.)

Photos/videos from WhatsApp, Instagram, other apps

1. Open the **Photos** app.
2. Touch **Albums**.
3. Touch the name of the app. (Swipe left if needed.)

Missing photos/videos

If you're having trouble finding photos or videos, read Google's support information.

Storage location

Photos and videos you've taken are stored on your phone (internal storage) or on your SD card, depending on your setting.

For either internal storage or the SD card, look in these folders.

Folder	Type of photo/video
DCIM	Taken with Camera app
Pictures/PhotosEditor	Your edited photos. Also check DCIM for edited photos.
Pictures/Screenshots	Screenshots
Pictures/[app]	Saved from messages or photo sharing apps

Share photos and videos

You can wirelessly share one, multiple, or all items from any Photos view, sending them as email or message attachments, uploading to the cloud, or using device-to-device connections like Bluetooth.

In addition to sharing wirelessly, you can transfer photos to your computer with a USB connection. You can also move photos from internal memory to SD card.

To share wirelessly:

1. Open the **Photos** app.
2. Navigate to the thumbnail of the item you want to share.
3. Select the item to share:
   - To select one item, touch & hold its thumbnail.
   - To select multiple items, touch & hold the first thumbnail, then touch the others to select them.

   Tip: To clear all selections, touch ◁.
4. Touch and select the way you want to share.

About wireless sharing

What you can share

You can share your photos and videos, contacts, screenshots, and downloaded files.

When sharing photos and videos

When deciding how to share your photos or videos, consider these factors:

- Resolution (high versus low) of the photo or video; high resolution uses more data
- Number of photos to share (one photo or a few or an entire vacation album)

- Whether you want to share on the internet or from device-to-device
- Length of availability for sharing

Ways to share

Method	Description
Message (MMS)	Good for: • Sharing one photo or a low-resolution video. • Sharing with a friend or group. • Sharing immediately, as an event is happening. Things to consider: • You and your recipients must have cellular data plans to receive multimedia text messages. • Sending high resolution photos via text message uses more more data. • Photos and video remain available until the recipient deletes the message. • High quality videos are too large and cannot be shared in text messages. Learn how
Email	Good for: • Sharing one or a few photos. • Sharing with a friend or group. Things to consider: • Some email providers limit attachment sizes. For large files, upload the file to a cloud storage and email the link instead of the file. • Email attachments remain available for download until the recipient deletes the email. Learn how
Cloud	Good for: • Sharing high resolution photos, multiple photos, entire albums, and videos. • Controlling sharing via links. • Controlling how long you share something; you can easily delete it or turn off sharing privileges. Things to consider: • Many cloud services offer free storage with a basic account.

- Cloud storage services are fairly secure, but not completely free from security breaches, so upload wisely.
- Upload over Wi-Fi to prevent cellular data charges.

Learn how

Social app

Good for:

- Sharing publicly, with large groups of friends, followers, and subscribers.
- Sharing one photo at a time, or many photos, albums, or videos.
- Controlling how long you share something. You can easily delete it or turn off sharing. Some social networks allow you to post photos and videos for only several seconds, to be viewed but not saved, while some posts remain available indefinitely. Check the social network for specifics.

Things to consider:

- Understand social network privacy and sharing policies before you post.
- Review updates to social network privacy and sharing policies often.
- Requires a Wi-Fi or cellular data connection.

Bluetooth

Good for:

- Sharing from phone-to-phone or other connected device.
- Fast sharing.

Things to consider:

- Your phone must be paired and connected with another device.

Upload photos and videos

Back up automatically

1. Open the **Photos** app.
2. Touch ≡ > **Settings** > **Back up & sync**.
3. Turn **Back up & sync** on ●.

4. Adjust settings as needed:
   - To choose high quality or original size for uploads, touch **Upload size**.
   - To back up items in your Download, Screenshots, and third-party app folders, touch **Back up device folders**.
   - To back up items over your cellular network, turn **Photos** and **Videos** on.
   - To allow syncing when your cellular service is roaming, turn **Roaming** on .

Back up manually

1. Open the **Photos** app.
2. Open the photo or video.
3. On the photo or video, touch .

View your backed up photos and videos

From your phone, open the Photos app.

From your computer, sign in to photos.google.com.

More help

To learn more, read Google's help.

Listen to radio

Listen to FM stations

Your phone uses wired headphones (any brand) to automatically tune to radio stations with the best signal. Listening to the radio doesn't use your mobile data.

1. Open the **FM Radio** app.
2. Plug headphones into your phone and touch to turn the radio on.

   Even when you listen through your phone's speaker, Bluetooth wireless speakers, or wireless headphones, you still need the wired headphones as your antenna.
3. Touch to scan for all available stations.
4. Do any of the following:
   - To view all stations and listen to any, touch .
   - To seek stations throughout the radio dial, touch or .
   - To tune to specific frequencies, touch < or >.
   - To add a favorite station shortcut, from the tuner or station list, touch .

     To remove one, on the station shortcut touch > **Remove favorite**.
   - To change between headphones or speakers, touch or .
   - If you're listening to the radio while using another app, use the notification to see what's playing, stop playback, or go to the previous or next track. Touch for options.
   - To turn the radio off, touch .

Tip: If you're having reception issues, try moving your phone as far from the headphones as possible to increase the size of the antenna. Or, try moving a short distance, towards a window if you are inside or away from buildings if you are outside.

Record current station

1. Touch > **Start recording**.
2. To stop recording, touch **STOP RECORDING**.
3. If desired, edit the recording's name.
4. Touch **SAVE**.

To listen to a recording, touch > **Saved recordings**.

Listen to music

Get music

Stream songs or download them to your phone so you can listen when you're on an airplane or don't have an internet connection.

Your phone can play MP3, FLAC, M4A, AAC, AAC+, MIDI, and WAV files.

To get music, do any of the following:

- Purchase it in an app, like YT Music. Then stream it or download it using that app.
- Transfer it over USB or Bluetooth from your computer to your phone's Music folder.
- Upload it from your computer to the cloud and listen on any internet-connected device.

Stream songs with YT Music

Easily find your favorite albums, singles, and live performances, and get recommendations for new music.

The streaming service is free and contains ads.

The paid, premium service offers:

- Ad-free, uninterrupted music
- Continuous play when the screen is locked
- Downloads for listening offline

To get started:

1. Open the **YT Music** app.
2. Touch to search for music, or use the tabs to browse:
   - **Home**: Get customized stations and recommendations based on your mood, activity, or listening history.
   - **Hotlist**: Find currently popular music.
   - **Library**: Add songs, albums, and playlists to your library.
3. To learn more about features or subscription pricing, touch your profile icon > **Help & Feedback**.

You can listen through your phone's speaker or by pairing with a Bluetooth speaker.

Listen with other apps

You can download apps for listening to and organizing music. Open the new app and touch or > **Help** to learn more.

Transfer music files

About transferring music

You can transfer purchased music files stored on your devices between devices you own.

Music apps that share music files from cloud storage typically share links to access stored files instead of transferring music files between devices. To transfer music files, the music must be stored on the device.

Send files over Bluetooth

To send music files stored on your phone:

1. Pair your phone with the device receiving the music.
2. On your phone, open the **Files** app and touch **Browse** > **Audio**.
3. Touch & hold the file.
4. Touch and select **Bluetooth**.
5. Touch the name of the paired device.

   During file transfer, you'll see in the status bar. To check the status, see the notification.

Receive files over Bluetooth

1. Pair your phone with the device sending the music.
2. On the device sending the music, start the file transfer, following device's instructions.
3. When you receive the Bluetooth notification on your phone, swipe down and touch it, then touch **Accept**.

   During file transfer, you'll see in the status bar. To check the status, open the notification.

The files are saved in Music/Bluetooth, where music apps will find them. You're ready to listen!

Tip: To see Bluetooth files you received, go to **Settings** > **Connected devices** > **Connection preferences** > **Received files**.

Transfer music from your computer

To move your music from your computer to your phone, connect them with a USB cable and copy the files to your phone's Music folder.

Connect a MIDI device

To connect a MIDI device:

1. Make sure you have:
   - A USB cable that's capable of data transfer and isn't for charging only.
   - A USB OTG adapter cable, if needed.
2. Turn the phone and MIDI device on.
3. Connect them with the USB cable (and adapter if needed).
4. Unlock the phone.
5. Change the USB connection type to allow MIDI connection:
   a. Swipe down from the top of your home screen and touch the **Charging this device via USB** notification.
   b. Touch **MIDI**.

Charge phone

How to charge phone

Your phone is like a small computer, giving you tons of information and apps. Depending on what you use, that can take a lot of power. Plan on charging the phone each night so it's ready for the next day.

1. Weaker chargers take longer to charge the phone, and if you use the phone while charging, may not charge it at all.
2. Insert the plug into an electrical outlet.

   When the phone is off and charging, you'll see the outline of a battery and a percentage. If the battery is completely discharged, this will not appear until the phone has received the minimum voltage required to boot.

   When the phone is on and charging, you'll see in the status bar.

Tips for charging phone

- You can use your phone while charging. To charge faster, don't use your phone while charging.
- If you can't turn the phone on while it's charging, wait until it receives enough voltage before turning it on.
- When the battery gets low, the phone sends a notification.
- Use Battery Saver mode when the battery is low.
- You can turn off charging sounds.

Extend battery life

Choose settings that use less battery

To get the most life from your battery:

- **Connections:** Turn off Bluetooth and GPS when you're not using them.
- **Wi-Fi:** Turn on Wi-Fi when the phone is in a location with Wi-Fi coverage.
- **Screen:** Turn down screen brightness and set a shorter screen timeout.
- **Sync:** If you don't need it, turn off automatic syncing for all accounts. This means you won't receive notifications when updates occur and you'll need to manually sync to get new emails.

Temporarily conserve battery power

Use Battery Saver mode to keep going on a low battery.

Also, avoid these battery-intensive activities until you can charge:

- Recording or watching videos
- Listening to music

- Taking pictures
- Using Live (animated) wallpaper

Keep adaptive battery and battery optimization on

To ensure that apps use your battery only when they need to, keep adaptive battery and battery optimization on.

Check that adaptive battery is on for your phone

When you keep adaptive battery on, infrequently used apps will run less when you're not using them. Your phone will learn how you use apps over time and adjust for best battery life.

1. Go to **Settings** > **Battery** > **Adaptive Battery**.
2. Turn **Use Adaptive Battery** on .

Check that battery optimization is on for each app

If you turn off Battery optimization for an app, that app can run when you're not using it, even when Adaptive Battery is on. This decreases battery life unnecessarily.

1. Go to **Settings** > **Apps & notifications** > **Advanced** > **Special app access**.
2. Touch **Battery optimization**.
3. If an app is listed as **Not optimized**:
   a. Touch the app.
   b. Touch **Optimize** > **Done**.

> **Tip:** Optimize isn't available for some essential services.

Use Battery Saver mode

When Battery Saver is on

Battery Saver helps you keep going on a low battery by until the next charge.

To save power, your phone will:

- Wait until you look at an app to refresh its content, like email or news
- Stop using Location services when your screen is off
- Stop apps from doing things in the background

When the phone is in Battery Saver mode, you'll see in the status bar.

Turn Battery Saver on or off

To turn Battery Saver on at any time, open quick settings and touch .

To turn Battery Saver on automatically when your battery's charge is below a specified level:

1. Open quick settings, then touch & hold .

2. Touch **Battery Saver** > **Turn on automatically**.
3. Move the slider to adjust the percentage when Battery Saver switches on.

About storage options

Phone internal storage

You can store photos, videos, music, and applications on your phone. Files you downloaded from the internet and attachments you save from email or text messages are stored there, too.

You can free up space when needed.

SD card storage

You can insert an SD card in your phone and use it as one of two formats: portable storage or internal storage. Be sure to buy the right type of card, depending on how you're going to format it.

Benefits include:

- Immediate access to your files
- No cellular data or internet connection required to access files
- More control over privacy

Cloud storage

Clouds are great for storing files, like photos, videos, and music, you want to share and access from other devices.

Benefits include:

- Access your files from any device with an internet connection
- File synchronization - no need to keep track of multiple versions in multiple storage locations
- Backups of photos and videos available if phone is lost or damaged

Cloud storage providers typically offer free storage that can be expanded with a paid subscription once you reach the free-storage limit. Or you can manage your free storage by removing files you no longer need to make space for new ones.

Apps like Drive and Photos let you easily back up media to cloud storage.

Manage phone storage

Free up space by scanning

To scan your phone for old and unused items to remove, like downloads and unused apps:

1. Open the **Files** app.
2. Touch **Clean**.

   You'll see suggestions for categories of items to check and free up space.
3. Touch the suggestions and follow onscreen instructions to uninstall, move, or delete items.

If you don't see suggestions to free up space, check that suggestions are on:

1. Open the **Files** app.
2. Touch ≡ > **Settings**.
3. Touch **Notifications** and turn on ones you want to receive.

Free up space manually

To free up space:

1. Open the **Files** app.
2. Touch **Browse**.
3. Touch a category (apps, images, videos, etc.) to view that type of item.
4. Do any of the following:
   - To uninstall apps, touch the app name, then touch **Uninstall**.
   - To clear an app's cache, touch the app's name, then touch **Storage** > **Clear cache**.
   - To clear your data for an app, touch the app's name, then touch **Storage** > **Clear storage**.
   - To delete media or other files, touch & hold to select one or more items, then touch 🗑.

Schedule automatic removal of photos and videos

If you automatically back up your photos and videos, you can automatically remove copies from your phone's internal storage after 30, 60, or 90 days.

1. Go to **Settings** > **Storage**.
2. If you installed an SD card, touch **Internal shared storage**.
3. Touch **Storage manager** and turn it on.
4. Touch **Remove photos & videos** and select a duration.

If you store photos or videos on your SD card, this does not delete them.

Manage SD card

Move photos, videos, music to SD card

To free up internal storage on your phone:

1. Be sure you've inserted and set up your SD card.
2. Open the **Files** app and touch **Clean**.

   Or, go to **Settings** > **Storage** > **Internal shared storage** > **FREE UP SPACE**.
3. If there are media files to move, touch the option to free up space.
4. Select items to move.
5. Touch **Move to SD card** > **Move**.

Tip: You can set the camera to store all new photos and videos on the SD card.

Move apps to SD card

To move apps to your SD card:

1. Make sure it is formatted as internal storage.
2. Go to **Settings** > **Apps & notifications** and touch the app to move.
3. Touch **Storage**.
4. Touch **CHANGE**. If you don't see this option, the developer does not allow the app to be stored on an SD card.
5. Select your SD card, then touch **Move**.

Move apps from SD card to phone

When you install an SD card as internal storage, it is part of your phone. If you want to change the SD card to portable storage or remove it from the phone to reformat and use in another device, first move the apps from SD card storage to your phone's internal storage:

1. Go to **Settings** > **Storage**.
2. Select your SD card.
3. Touch **Apps** and select an app.
4. Touch **CHANGE** > **Internal shared storage** > **Move**.

Eject SD card

Internal storage

1. Move apps from the card back to phone internal storage before you eject the card. If you remove the card without moving the apps:
   - You will lose access to the apps/games on card and will need to reinstall them.
   - Your apps and phone's performance will degrade.
2. Go to **Settings** > **Storage**.
3. Touch the SD card name.
4. Touch ⋮ > **Eject**.
5. Remove the card from the phone.

Portable storage

To eject the card, drag the SD card notification down, and touch **Eject**.

If you don't see the notification:

1. Go to **Settings** > **Storage**.
2. Next to your SD card name, touch ⏏.

It's now safe to remove the card from the phone.

To insert the card into another device (computer, projector, etc.) that uses different card dimensions, you may need the adapter that came with your card. See device manufacturer's instructions for the type of adapter required and insertion instructions.

Erase SD card

1. Go to **Settings** > **Storage**.
2. Select your SD card.
3. Touch ⋮ > **Storage settings** > **Format**.
4. Follow onscreen instructions to format the card.

Format SD card

You'll need to choose one of two formats for your SD card:

- Use as portable storage if you want to move the card to other devices to access your media.
- Use as internal storage if you need more device storage to install large apps and games and plan to use the card only in your phone.

	Portable storage	Internal storage
Store media (photos, videos, music)	yes	yes
Store apps	no	yes
Content encrypted	no	yes
Read card in other devices	yes	no

To format the inserted card:

1. Go to **Settings** > **Storage**.
2. Touch the SD card's name.
3. Touch ⋮ > **Storage settings**.
4. Touch **Format as internal** or **Format as portable**.

   If you don't see **Format as internal**, then your phone only supports SD cards formatted as portable storage.

If you formatted as portable storage, be sure to update settings in media apps (like camera, music, and podcast apps), so they use the card to store content you create or download.

Find downloaded files

You can download files and store them on your phone, including:

- Photos, videos, and documents you save from emails or texts
- Books, movies, or other content that you buy from Play Store and save for offline viewing
- Other files or images you download from the web

When the file has finished downloading, you'll see in the status bar. Touch the notification to open the file in the appropriate app.

To view, edit, or delete downloads:

1. Open the **Files** app.
2. Touch **Browse** > **Downloads**.
3. Do any of the following:
   - To open or play a file, touch it.
   - To sort files by name, date modified, or size, touch the label to sort by it.
   - To share a file, touch & hold it, then touch .
   - To delete a file, touch & hold it, then touch .

Tip: To access downloads from a computer, connect your phone with a USB cable. Then open the phone's internal storage, and look for files in the Downloads folder.

Recover recently deleted files

You can try to recover recently deleted photos, videos, or texts. But do so as soon as possible. The more you use the phone, the more likely the file will be overwritten with new data.

1. Search for “file recovery” in Play Store and install one of the apps.
2. Use the app to scan your phone.
3. If you can't recover recently deleted items, try connecting your phone to your computer with a USB cable and using a desktop program for file recovery.

Tip: Back up your photos to the cloud so you won't lose them if you delete them from your phone.

Upload music to cloud

You can store up to 20,000 songs from your library in the cloud, for free, with Google YT Music (not available in all countries). Then you can instantly listen to your tunes wherever you are.

You can upload music from your:

- iTunes library
- Windows Media Player library
- My Music folder, or any folder on your computer

To upload your music, use Google YT Music for Chrome or install the Music Manager application on your computer. On your computer, visit play.google.com/music and click ≡ > **Upload music**. To learn more, read Google's help.

After you've uploaded your music, you can listen to it:

- On your computer by visiting www.google.com/music
- On your phone with the YT Music app

Upload photos and videos

Back up automatically

1. Open the **Photos** app.
2. Touch ≡ > **Settings** > **Back up & sync**.
3. Turn **Back up & sync** on.
4. Adjust settings as needed:
   - To choose high quality or original size for uploads, touch **Upload size**.
   - To back up items in your Download, Screenshots, and third-party app folders, touch **Back up device folders**.
   - To back up items over your cellular network, turn **Photos** and **Videos** on.
   - To allow syncing when your cellular service is roaming, turn **Roaming** on.

Back up manually

1. Open the **Photos** app.
2. Open the photo or video.
3. On the photo or video, touch .

View your backed up photos and videos

From your phone, open the Photos app.

From your computer, sign in to photos.google.com.

More help

To learn more, read Google's help.

Scan documents and make copies

Scan document to Drive

You can scan important documents with your phone and save them as PDFs on Google Drive.

1. Open the **Drive** app.
2. Touch > .
3. Align your phone over the document to scan and touch .
4. Touch .
5. Optionally:
   - Touch to crop.
   - Touch to select image enhancement options.
   - Touch to delete, rename, and adjust image and PDF settings.
   - Touch to reset the scanner (deletes current unsaved scan).
   - Touch to add another page.
6. When you've finished scanning, touch .
7. Change the document title and folder on Drive, if desired, then touch **Save**.

In Drive, open the file and touch to share or print the scan.

Tip: You can also use the Camera app to scan information.

Scan and save to folders from your home screen

Add Drive Scan widgets to your home screen to scan and save to new or selected folders. Each widget saves to a single folder on Drive. So, add multiple widgets, one for each folder you need (receipts, billing statements, recipes, etc.).

Connect to Wi-Fi networks

Turn on and connect

Turn Wi-Fi on

Open quick settings and touch .

Your phone automatically connects to nearby Wi-Fi networks you've connected to before.

When you're connected, you'll see in the status bar. If the connection is poor, you'll see instead.

Search for available networks

1. Open quick settings, then touch & hold .
2. Turn **Use Wi-Fi** on .

   You'll see a list of available networks. If a network needs a password, you'll see .
3. Touch the Wi-Fi network you want to connect to.
4. If the network is a secure one, enter the password. For your home network, get the password from the label on the Wi-Fi router. For a public network, get the password from the business or organization.

> **Tip:** Make sure you enter the password correctly. Touch **Show password** to see what you're typing.

Change or remove networks

Change

1. Open quick settings, then touch & hold .
2. In the list of nearby networks:
   - To connect to a different network, touch its name.
   - To change settings for the currently connected network, touch > .
   - To change settings for a saved network, touch & hold its name, then touch **Modify network**.

Remove

If you don't want to automatically connect to a saved Wi-Fi network, you can forget that network.

1. Open quick settings, then touch & hold .
2. If the network appears in your list of nearby networks, touch & hold its name, then touch **Forget network**.
3. To review all of your saved networks, touch **Saved networks**. For each network you want to remove, touch its name, then touch **Forget network**.

Turn Wi-Fi off

To extend the life of your battery between charges, turn off Wi-Fi when you're not in a location with access to Wi-Fi.

Open quick settings and touch to turn it off.

Advanced: Disable Wi-Fi scanning

1. Go to **Settings** > **Security & location**.
2. Touch **Location** > **Advanced** > **Scanning**.
3. Turn **Wi-Fi scanning** off .

Use Airplane mode

Airplane mode turns off all wireless connections, preventing your phone from transmitting signals that could interfere with airplane communications.

Open quick settings and touch to turn airplane mode on. This disables all wireless connections (Wi-Fi, voice and data for calls and text messages, Bluetooth). If permitted by your airline, you can then turn Wi-Fi and/or Bluetooth back on during the flight. Other wireless connections remain off.

Control data usage

Turn mobile data off/on

To toggle it on/off, swipe the status bar down and touch .

When you turn off data usage over your cellular network, you can still use data by connecting to a Wi-Fi network.

Cellular data must be ON if you want to:

- Receive or send multi-media messages
- Share your phone's internet connection with other devices

Set data limit

Sometimes it's easy to exceed your data plan limit without realizing it. To avoid surprises, set a usage warning that notifies you when you're close to your limit, and set a usage limit that turns off cellular data when the limit is reached.

1. Go to **Settings** > **Network & internet** > **Data usage**.

   Or, open quick settings, then touch & hold .
2. Touch **Data warning & limit**.
3. To set a warning, turn **Set data warning** on , then touch **Data warning** and enter the amount of data.
4. To set a usage limit, turn **Set data limit** on , then touch **Data limit** and enter the amount of data.

Restrict background data

Even when you're not using them, most apps sync data in the background.

You can prevent specific apps from ever sending or receiving data in the background. Also, if you're running low on data during your billing cycle, use Data Saver to conserve your remaining data. Data Saver lets you quickly turn off background data usage for **all** apps; if you have one or two that want to continue using background data, you can set them as exceptions.

When you restrict background data, you will not receive notifications from apps that typically sync in the background (like Gmail) until you open the app; then data syncs as usual.

If you're running low on data during your billing cycle:

1. Go to **Settings** > **Network & internet** > **Data usage**.

   Or, open quick settings, then touch & hold .

2. Touch **Data Saver** and turn **Use Data Saver** on .

   You'll see in your status bar and all apps are prevented from using background data.

   Tip: The first time you turn Data Saver on, is added to quick settings. After that, just swipe the status bar down and touch to turn Data Saver off/on.

3. To allow certain apps to continue using background data, touch **Unrestricted data**, then next to the app name, slide the switch on .

To prevent specific apps from ever using background data:

1. Go to **Settings** > **Network & internet** > **Data usage**.

   Or, open quick settings, then touch & hold .

2. Touch **App data usage**.

3. Touch an app, then turn **Background data** off .

Restrict background data for Wi-Fi networks

If you have to pay for data usage on a Wi-Fi network, you can restrict apps from using background data on that network.

1. Go to **Settings** > **Network & internet** > **Data usage**.

   Or, open quick settings, then touch & hold .

2. Touch **Network restrictions**.

3. For each Wi-Fi network where you pay for data usage, slide the switch on to indicate it is a metered Wi-Fi network.

   Any restrictions that you set up on background data for cellular networks will also apply for these metered Wi-Fi networks.

Dual SIMs

If your phone has two SIMs, cellular data is active on only one SIM at a time. You can control which SIM is used.

Share your internet connection

About hotspots and tethering

Want to use the internet on a laptop computer or tablet but don't have a connection? You can share your phone's cellular data connection with multiple devices by turning your phone into a Wi-Fi hotspot. You can also share your internet connection with a single device using USB tethering or Bluetooth tethering.

Note: Your cellular plan must support data sharing. If you don't know, contact your carrier.

Set up Wi-Fi hotspot

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.
2. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
3. Touch **Wi-Fi hotspot** and do any:
   - To make it easier to identify your hotspot when connecting to it, change the network name for your hotspot.
   - To prevent others from seeing your phone's network name, check **Hide my device**.
   - To see the current password, touch **Advanced** > **Hotspot password**.
   - If the hotspot signal is experiencing interference, touch **Advanced** and change the broadcast channel/band to 5GHz. If the hotspot signal seems weak, change it to 2GHz. (This feature is not available in all countries.)

Connect devices to hotspot

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.
2. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
3. Touch **Wi-Fi hotspot** and turn it on, then plug in your phone to charge. Using the hotspot really drains the battery!

   When your hotspot is active, you'll see in the status bar.

   Tip: The first time you turn the hotspot on, is added to quick settings. After that, just swipe the status bar down and touch to turn the hotspot off/on.

4. To connect a device, open the device's Wi-Fi settings, select your phone's hotspot and enter the hotspot password. Learn how to find the hotspot's password.

To disconnect devices from your hotspot, touch **Wi-Fi hotspot** and turn it off. When you turn it back on, devices with the password can connect automatically. To prevent this, change the password.

Manage hostpot connections

By assigning a password when you set up your hotspot, you ensure that people can't connect to your hotspot without your knowledge or permission.

To manage connections:

1. Go to **Settings** > **Network & internet** > **Mobile Hotspot & Tethering**.
2. Touch **Mobile Hotspot settings** > **Advanced**.
3. Adjust settings:
   - To limit number of allowed users, touch **Maximum connections**.
   - To view and block users, touch **Connected users**.
   - To remove blocks on users, touch **Blocked users**.

To disconnect all devices and prevent users from reconnecting:

1. Turn the hotspot off.
2. Change the password.
3. Turn the hotspot back on to continue using it.

Tip: When no devices are connected, the hotspot turns off automatically. To adjust this setting, go to **Settings** > **Network & internet** > **Hotspot & tethering** > **Wi-Fi hotspot** > **Advanced** > **Turn off hotspot automatically**.

View or change hotspot password

1. Go to **Settings** > **Network & internet** > **Hotspot & tethering**.
2. Touch **Wi-Fi hotspot**.
3. Touch **Advanced** > **Hotspot password** to see the current password.
4. To change the password, type over the current password.

Note: Although you can turn off passwords for your hotspot, keeping a password prevents unauthorized usage of your cellular data.

USB tethering

To connect a device to the internet using your phone's cellular data and a USB cable:

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.
2. Connect your phone to your computer with a USB cable.
3. On your phone, go to **Settings**.
4. Touch **Network & internet** > **Hotspot & tethering**.
5. Turn on **USB tethering** to start the connection.

   You'll see in your notifications.

To stop the connection, touch the notification and turn off **USB tethering**, then disconnect your phone and computer.

Bluetooth tethering

To connect a device to the internet using your phone's cellular data and a Bluetooth connection:

1. Check that cellular data is on. If cellular data is off, your phone doesn't have an internet connection to share.
2. Turn on Bluetooth on your phone and pair with the other device.
3. Set up the other device to get its network connection via Bluetooth.
4. On your phone, go to **Settings**.
5. Touch **Network & internet** > **Hotspot & tethering**.
6. Turn on **Bluetooth tethering** to start the connection.

   You'll see in your notifications.

To stop the connection, touch the notification and turn off **Bluetooth tethering**.

Connect to VPNs

A virtual private network (VPN) lets you access files on a secure network like an office network with a firewall. Contact your network administrator for VPN settings and any additional apps or requirements.

To set up a VPN connection:

1. Go to **Settings** > **Network & internet**.
2. Touch **Advanced** > **VPN**. If prompted, set a screen lock PIN or password.
3. Touch .
4. Choose the type of VPN and enter settings from the network administrator.
5. To always remain connected to the VPN, check **Always-on VPN**.
6. Touch **SAVE**.

The network is stored in the VPN list so you can select it when you need to connect.

Connect with Bluetooth™

Turn Bluetooth on/off

Bluetooth uses more of your battery, so turn it off when not in use.

1. Open quick settings.
2. Touch the icon to switch on/off:

   is on.

   is off.

Pair with Bluetooth device

To connect with a new Bluetooth accessory or other device, you need to pair with it. You only need to do this once for each device.

1. Set the device you want to pair (accessory, computer, other phone, etc.) to Bluetooth discovery mode so that your phone can find it. See the device manufacturer's instructions.
2. On your phone, go to **Settings** > **Connected devices**.
3. Touch +.

   As the phone searches for available devices, you'll see .
4. Touch an available device to connect.
5. Do any of the following:
   - If a pairing code appears on your phone and Bluetooth device, make sure the codes match. (If they don't, touch **Cancel**, verify the name of the device you want to pair with, and try again.)
   - If your device shows a passkey (like 0000 or 1234), enter it on your phone. If you don't see a place to enter it, swipe down from the top of your screen and touch the Bluetooth notification.
   - If your device doesn't show a passkey and you must enter one for the device to pair, see the device manufacturers' instructions.
6. Touch **Pair** on your phone AND touch the pairing prompt on the other device. If you don't confirm on both devices, pairing will fail.
7. Set sharing options if you'll want to share contacts, phone audio, media audio, or internet access.

Tip: If you use a screen lock, you can define a paired Bluetooth device as a trusted device, keeping your phone unlocked while connected to it. When you disconnect or move out of range, your phone locks again. Go to **Settings** > **Security & location** > **Smart Lock** > **Trusted devices**.

Can't pair? Try these troubleshooting steps.

Use paired device

Tip: Bluetooth connections can really drain your battery. Save power by turning Bluetooth off when you're not connected to a device.

After pairing with a device, you'll need to set sharing options and then you can use Bluetooth to:

- Make or receive calls with a headset
- Make or receive calls and play music over your car's audio system
- Transfer music
- Share photos
- Share contacts
- Share your phone's internet connection with your computer

To set sharing options:

1. Go to **Settings** > **Connected devices**.
2. Do one of the following:
   - For a currently connected device, touch the device name.
   - For a paired device you're not connected to, touch **Previously connected devices**, then next to the device name, touch ⚙.
3. Turn sharing options on or off.
4. On the paired device or in the device's app, look for Bluetooth settings to review and adjust. For more information, see the paired device manufacturer's instructions.

Reconnect with Bluetooth device

1. Open quick settings and touch ✱ to turn it on.
2. Turn on the Bluetooth device.

Change phone's name

Your phone name identifies your phone in a Bluetooth network. You can change the name.

1. Go to **Settings** > **Connected devices**.
2. Touch ⋮ > **Device name**.

Connect with Wi-Fi Direct

If you have a device, like a printer or TV, that supports Wi-Fi Direct, you can connect your phone without a wireless router or cable.

When you turn on your phone's Wi-Fi, Wi-Fi Direct is automatically enabled.

To connect to a Wi-Fi Direct device:

1. On the device you want to connect, set up Wi-Fi Direct. For instructions, see that product's user guide.
2. On your phone, go to **Settings** > **Network & internet** > **Wi-Fi** > **Wi-Fi preferences**.

3. Touch **Advanced** > **Wi-Fi Direct**.

   You'll see a list of Wi-Fi Direct devices that are within range and compatible.

4. Touch the device's name to connect.

Cast screen or media to TV

Mirror with Chromecast

To mirror your screen on a TV, showing all apps and screens you use on your phone, you must:

- Use a TV with Chromecast built-in.
- Or, plug a Chromecast into your TV's HDMI port. (Learn how.)

To start casting:

1. Make sure your phone and Chromecast or TV with Chromecast are connected to the same Wi-Fi network.
2. Go to **Settings** > **Connected devices** > **Connection preferences** > **Cast**.

   Or, from quick settings, touch .

3. Touch the name of the Chromecast or TV to connect.

To stop:

- On the casting notification, touch > **Disconnect**.
- Or, from quick settings, touch > **Disconnect**.

Cast an app

You can cast an app if you:

- Have a smart TV that supports mobile apps for viewing or playing media from your phone. See your TV user guide for instructions to connect your phone.
- Have Chromecast or a TV with Chromecast built-in.

Miracast is not supported.

To cast an app:

1. Make sure your phone and smart TV or Chromecast are connected to the same Wi-Fi network.
2. In a cast-compatible app (like YouTube), touch .

While casting:

- You'll see in the status bar.
- You can still make and receive calls and use your phone's other features.

To stop casting:

- In the app that's casting, touch and touch the option to disconnect.
- From the notification, touch .

Cast personal media with Wi-Fi Direct

If your TV supports Wi-Fi Direct, set up a connection between your phone and TV so that you can view or play media from your phone.

For information about using Wi-Fi Direct after you've connected, see the user guide that came with your TV.

Fix a problem

If you can't cast:

- If you're using a VPN, turn off the VPN and try again.
- Make sure your phone and Chromecast or TV with Chromecast are connected to the same Wi-Fi network.
- Move your phone to within 15 feet of your Chromecast or TV with Chromecast.

Transfer files between phone and computer (USB)

About USB transfers

You can transfer music, photos, and other files between your phone's storage and computer (in either direction). Use a USB cable that's capable of data transfer and isn't for charging only.

When you connect the phone and computer with the USB cable, the phone's USB connection type is set to charging mode, which charges your battery but prevents your computer from seeing files on your phone. Before transferring files, change the USB connection type to allow transfer of:

- Any type of file
- Only photos and videos

Connect phone to transfer files

1. With the phone and computer turned on, connect the phone and computer with a USB cable.
2. Unlock the phone.
3. Change the USB connection type to allow file transfers:
   a. Swipe down from the top of your home screen and touch the **Charging this device via USB** notification.
   b. To transfer any type of file, touch **File transfer**.

      Or, to transfer only photos and videos, touch **PTP**.

Transfer files

On a Windows computer:

1. Ensure the phone is properly connected to the computer using the steps above.

   If you don't unlock the phone and change the USB connection to allow file transfers, you won't see any files on your phone.

2. On your computer, open File Explorer, click the name of your phone, and navigate to its internal storage or SD card.
3. If you selected **PTP** when you connected the phone, in File Explorer choose whether to import pictures and videos automatically or manually.
4. Open a second File Explorer window to see your computer folders.
5. Navigate to the folders or files to transfer, then drag and drop them to and from the open phone storage and computer folders.

On a Mac:

1. Ensure the phone is properly connected to the computer using the steps above.

   If you don't unlock the phone and change the USB connection to allow file transfers, you won't see any files on your phone.
2. On your computer, download the Android File Transfer application from www.android.com/filetransfer and follow the onscreen instructions.

Location of files

Files are stored in these folders on your phone:

- **DCIM**: (Digital Camera Images) Photos and videos taken with the Camera app
- **Pictures**: Photos you edited and photos from apps other than Camera
- **Download**: Files downloaded from the internet
- **Music**: Files for apps that play music
- **Ringtones**: Sound files for ringtones
- **Notifications**: Sound files for notifications
- **Alarms**: Sound files for alarms

Fix a problem

If you're having problems, try these troubleshooting steps.

Print from your phone

Set up: Wi-Fi or Wi-Fi Direct

To connect your printer and phone:

1. Before you begin:
   - If your printer is connected to a Wi-Fi network, be sure the phone and your printer are connected to the same network.
   - If your printer supports Wi-Fi Direct, set up a direct connection between the phone and printer.
2. Go to **Settings** > **Connected devices** > **Connection preferences** > **Printing**.

3. Touch **Default Print Service** to automatically find your printer.

   Once your printer is found, it is ready to print.

If your printer isn't found in Default Print Service:

1. Touch **Add service**.
2. In Play Store, search for “[printer brand] print service” and install the app for the printer's service plugin.
3. Once installed, return to **Settings** > **Connected devices** > **Connection preferences** > **Printing** and touch the print service plugin name to automatically find your printer.
4. If your printer isn't found automatically, touch ⋮ > **Add printer** > +.
5. Enter the printer's name and IP address (found in your printer settings on connected computer).

Set up: Cloud Print

Note: Google will no longer support Cloud Print after December 31, 2020. To learn more, read Google's support information.

To connect your printer and phone:

1. Be sure your printer is on and added to your Google account. Learn more.
2. Go to **Settings** > **Connected devices** > **Connection preferences** > **Printing**.
3. Touch **Add service** and search for “Cloud Print”.
4. Touch the **Cloud Print** app, then touch **Install**.

Print

1. Open the item to print, such as:
   - A photo in Photos
   - An email
   - A document in Drive
   - A web page in Chrome.
2. Touch ⋮ or ≡ > **Print**. (In some apps, **Share** > **Print**.)
3. Select printer options if needed.
4. Touch 🖨.

Change app settings

Set or change default apps

If you have multiple apps that do the same thing, you can pick which app to use by default.

Pick when asked

Sometimes, your phone asks which app to use. For example, your phone might ask which app to use to open a PDF file.

To set a default when asked:

1. Touch the app to use.
2. Pick how often you want to use that app for this action: **Always** or **Just once**.

If you select Always, you won't be asked which app to use anymore. To have your phone ask you again, you can clear the default:

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Default apps** > **Opening links**.

   Or, touch **Advanced** > **Default apps** > **Opening links**.
3. Touch the app you selected as default.
4. Touch **Open supported links** and select **Ask every time**.

Pick any time

You can change some default apps (such as browser or messaging) at any time:

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Default apps**.

   Or, touch **Advanced** > **Default apps**.
3. Touch the default to change.
4. Touch the app to use.

Adjust app permissions

The first time you use an app, and sometimes when you install or update it, you are asked to grant the app permission to access certain data and phone features. You can adjust these permissions any time.

To adjust permissions by feature:

1. Go to **Settings** > **Apps & notifications**.
2. Touch **Advanced** > **App permissions**.
3. Touch a feature to see which apps have permission to use it.
4. Turn that permission on or off for each app as needed.

You can also adjust permissions by app, for all features.

Adjust special app access

In **Settings** > **Apps & notifications** > **Advanced** > **Special app access**, you can adjust these settings:

- **Usage access**: Control which apps have access to data about your app usage (what other apps you're using and how often, your carrier, language settings, and other details).
- **Unrestricted data**: Allow certain apps to use background data even when Data Saver is on. Learn more.

You can also control whether apps have access to features such as Picture-in-picture, Battery optimization, and Do Not Disturb. In general, you shouldn't need to adjust these.

Choose how apps notify you

Stop app from sending notifications

When you receive unwanted notifications from an app, touch & hold the notification, then touch **Stop notifications**.

To review all apps and adjust whether they can send notifications:

1. Swipe down to view your notifications.
2. At the bottom of the list, touch **Manage notifications**.
3. Do one of the following:
   - To stop all notifications from an app, turn it off .
   - To stop certain notifications from an app, touch the app name, then turn notifications or off for each category.

Tip: To prevent notifications from all apps during certain times or calendar events, use Do Not Disturb.

Choose urgency of app's notifications

For each app, you can control how urgently that app's notifications alert you when they arrive. You can choose between having notifications:

- Make sound and pop on screen
- Make sound
- Show silently
- Show silently and minimize (only show in your notification list)

To change the urgency of an app's notifications:

1. Touch & hold the app icon.
2. Touch > **Notifications**.
3. Touch the name of a checkmarked notification category, then touch **Behavior** and make a selection.

Tip: To adjust several apps at once, go to **Settings** > **Apps & notifications**, touch > to see all apps. Then touch **Notifications** for each app and adjust behavior.

Change notification sound

To change the sound for all app notifications:

1. Go to **Settings** > **Sound** > **Default notification sound**.
2. Do one of the following:
   - To change it, choose a new sound.
   - To turn notification sounds off, select **None**.

To change the notification sound for a specific app:

1. Touch & hold the app icon.
2. Touch ⓘ > **Notifications**.
3. Touch the category for checkmarked notifications, then touch **Advanced** > **Sound** and select a unique ringtone, or set it to none.

   If you don't see **Sound**, touch **Behavior** and select an option that includes sound.

To adjust the volume level of notifications:

1. Press a Volume button and on the screen touch ⚙.
2. Adjust the 🔔 slider.

Bypass Do Not Disturb

To let an app's notifications be heard when Do Not Disturb is on:

1. Touch & hold the app icon.
2. Touch ⓘ > **Notifications**.
3. Touch the category for enabled notifications, then touch **Advanced** and turn **Override Do Not Disturb** on ●.

Turn notification dots off or on

You can control whether app icons show dots to alert you about unread notifications.

To turn off for all apps:

1. Go to **Settings** > **Apps & notifications** > **Notifications**.
2. Turn **Allow notification dots** on ● or off ○.

To turn off for one app:

1. Touch & hold the app icon.
2. Touch ⓘ > **Notifications**.

3. Touch **Advanced**.
4. Turn **Allow notification dot** on or off .

Control lock screen notifications

If you've set a pattern, PIN or password, you can prevent lock screen notifications from revealing private information.

To adjust notifications for all apps:

1. Go to **Settings** > **Apps & notifications** > **Notifications**.
2. Touch **On lock screen**.
3. Do one of the following:
   - To hide all notifications on your lock screen, select **Don't show notifications at all**. You can still peek at your notifications--swipe down on the lock screen, then enter your pattern, PIN, or password if required.
   - To hide sensitive content in notifications from **all** apps, select **Hide sensitive content**. For example, you'll get a lock screen notification for an incoming email or chat, but it won't include message details.
   - To see all notifications on your lock screen, select **Show all notification content**.

To hide sensitive content from specific apps:

1. Set lock screen notifications for all apps to **Show all notification content**.
2. Touch & hold the app icon, then touch > **Notifications**.
3. Touch the category for checkmarked notifications.
4. Touch **Advanced** > **On lock screen** > **Hide sensitive content**.

Tip: When you turn on Lockdown, notifications won't show on your lock screen.

Stop automatic rotation

Prevent screen from rotating

Open quick settings and turn Auto-rotate off .

In this mode, you can manually rotate the current app. Touch by the navigation buttons.

Allow screen to rotate

To allow rotation for all apps, open quick settings and turn Auto-rotate on .

You can also adjust this in **Settings** > **Display** > **Advanced** > **Auto-rotate screen**

Tip: If your home screen isn't rotating but Auto-rotate is on, then check your home screen settings. Touch & hold a blank spot on your home screen, then touch **Home settings** > **Allow Home screen rotation**.

Choose color mode

You can change the intensity of color on your screen for a realistic or enhanced look.

1. Go to **Settings** > **Display**.
2. Touch **Color temperature**.
3. To change the color temperature, drag toward **Warm** or **Cool**.

Tip: If you're color blind, use color correction instead.

Adjust screen colors at night

Set the schedule

Your phone can automatically filter out blue light and adjust screen colors to warmer tones at night, making it easier to view and read in dim light. You might even fall asleep more easily.

1. Go to **Settings** > **Display** > **Night Light**.
2. Touch **Schedule**, then:
   - To start and stop at specified times, touch **Turns on at custom time** and enter times.
   - To filter from dusk to dawn, touch **Turns on from sunset to sunrise**.

When Night Display is adjusting colors, you'll see in the status bar.

Turn on/off any time

To turn Night Light on or off at any time, open quick settings and touch or .

If it's not in quick settings, add it by turning Night Light on for the first time. Go to **Settings** > **Display** > **Night Light** > **Turn on now**.

Adjust filter intensity

When Night Light is on, you can adjust the filter intensity:

1. In quick settings, touch & hold .
2. Use the slider to adjust the intensity of the amber filter.

Adjust screen brightness

Your phone automatically optimizes the brightness of your screen based on current lighting conditions.

Tip: You can also adjust the brightness in quick settings by sliding .

Adaptive brightness is on by default. To adjust this setting:

1. Go to **Settings** > **Display**.
2. Turn **Adaptive brightness** on or off.

Change font and display size

You can make the text or other items on your screen smaller or larger for your comfort and convenience.

1. Go to **Settings** > **Display** > **Advanced**.
2. Do any of the following:
   - To adjust the size of text on the screen, touch **Font size**, then drag the slider to the size you want.
   - To adjust the size of icons and other screen elements, touch **Display size**, then drag the slider to the size you want.

If you have visual impairments, turn on accessibility features.

Change theme

The background of quick settings and your list of all apps is either light or dark, based on the wallpaper you selected. To change this:

1. Go to **Settings** > **Display**.
2. Touch **Advanced** > **Device theme**.

3. Choose **Light** or **Dark**.

You can also change the background color for:

- Your keyboard (Learn how.)
- Individual apps, like Messages and Phone (Open the app, touch ⋮ or ☰, and look for light/dark settings.)

Change screen timeout

Change when your phone goes to sleep

1. Go to **Settings** > **Display** > **Advanced**.
2. Touch **Sleep** and select the time of inactivity before your phone sleeps.

> **Tip:** Set a shorter time to extend battery life.

Use Ambient display

Ambient display lets you glance at your notification icons, time, date, and battery percentage when your screen is off.

Ambient display information shows when:

- A new notification arrives
- You pick up your phone or nudge it

To access your lock screen or home screen:

- Touch the Ambient display screen twice
- Or, press the Power button

To turn Ambient display off or on:

1. Go to **Settings** > **Display**.
2. Touch **Advanced** > **Ambient display**.
3. Turn **New notifications** on or off.

About security

Screen lock options

To keep your phone secure, use a screen lock when it goes to sleep:

- Choose a pattern, PIN, or password to unlock.
- Add a Smart Lock to unlock automatically when connected to a trusted device, when you're at a trusted place (like home or work), or until you set your phone down.
- You can access notifications and quick settings, start a call, and launch the camera from the lock screen.
- You can make emergency calls on a locked phone. A locked phone still rings; you don't need to unlock it to answer.
- If you forgot your pattern, PIN, or password, follow these steps.

You can customize the lock screen by adding your contact info. You can also control which notifications appear on your lock screen.

Fingerprint sensor

Quickly and easily verify your identity using the fingerprint sensor on your phone, instead of entering a password, PIN, or pattern to unlock the phone, make online and in-store purchases, and sign into banking and financial apps.

You can add and remove fingerprints.

Fingerprints:

- Are created from features of your fingertip, converted to a mathematical representation, and then encrypted and stored only on the phone. No fingerprint images are ever stored.
- Are never shared with Google or Motorola.
- Are never shared with other apps. Your phone only shares the verification, not the fingerprint.

Note: A fingerprint screen lock may be less secure than a strong pattern or PIN lock. It is possible to unlock the phone using a physical copy of a matching fingerprint.

Additional security options

For additional security, you can also:

- Protect your phone in case it’s lost or stolen. Use Find My Device.
- Connect to a virtual private network if you need to access files on a secure network.
- Add a SIM lock to prevent others from using your cellular plan and accessing account information if your phone is stolen.
- Prevent viruses and other attacks on your data and privacy with Google Play Protect.

Protect against harmful apps

Scan phone for harmful apps

Play Protect helps keep your phone secure by automatically scanning your phone to check for potentially harmful apps.

If Play Protect finds a potentially harmful app, it stops the app from running and warns you so you can uninstall it.

To see the results or to rescan:

1. Open the **Play Store** app.
2. Touch ≡ > **My apps & games**.
3. Do any of the following:
   - To see the results of latest scan, on the UPDATES, look at the message next to .
   - To rescan your phone, touch .

If your phone seems slow

If you've scanned your phone to confirm there aren't any potentially harmful apps but your phone seems slow, try these troubleshooting steps.

Be ready to find a lost phone

Make sure your phone can be found. Find My Device allows you to remotely locate, lock, and erase your phone.

If you ever need to find your phone, your phone will need to:

- Be turned on
- Be signed in to a Google account
- Be connected to mobile data or Wi-Fi
- Have location services turned on
- Have Find My Device turned on

To check that Find My Device is on for your phone:

1. Go to **Settings** > **Security & location**.
2. Touch **Find My Device** and turn it on .
3. To learn more, touch ⋮ > **Help & Feedback**.

To confirm that you can find your phone, go to android.com/find on your phone or from a computer.

Set screen lock

Screen lock options

When you set a screen lock, each time you turn on your phone or wake the screen, you'll be asked to unlock your phone.

No lock:

- **None**: This gives no protection, but you can quickly access your home screen.
- **Swipe**: Swipe up. This prevents accidental dialing but doesn't secure the phone.

Lock:

- **Pattern**: Draw a pattern on a grid.
- **PIN**: Enter a four to sixteen digit numeric code. Longer PINs are more secure.
- **Password**: Enter four to sixteen letters, digits, or symbols for the password. A long, strong password is the most secure option.

When you're using any of the 3 locks, you can set your phone to automatically unlock in certain conditions.

Set or change screen lock

1. Go to **Settings** > **Security & location**.
2. Touch **Screen lock** and select the type of lock you want.

   Some lock options aren't available if you added a VPN or a work (corporate) email account to your phone.

Hide your password or pattern

You can hide your password or pattern to prevent others from viewing it when you unlock your screen.

For passwords:

1. Go to **Settings** > **Security & location**.
2. Turn **Show passwords** off .

For patterns:

1. Go to **Settings** > **Security & location**.
2. Touch .
3. Turn **Make pattern visible** off .

Quickly tighten lock screen security

Unlocking with the fingerprint sensor and setting up automatic unlocking make it easier to keep your phone secure and minimize when you need to enter your PIN, pattern, or password. But sometimes you need to trade convenience for more security. You can temporarily tighten locks and prevent lock screen notifications.

To set it up:

1. Go to **Settings** > **Security & location** > **Lock screen preferences**.
2. Turn **Show lockdown option** on .

To use it:

1. Touch & hold the Power button.
2. Touch **Lockdown**.

   Your fingerprint sensor and automatic unlock settings are disabled and notifications won't be displayed on your lock screen.
3. To exit Lockdown, unlock your phone with your PIN, pattern, or password.

Unlock your screen automatically

If you're using a PIN, password, or pattern, you can:

- Stay unlocked when connected to a device, like your car audio system.
- Stay unlocked at a specific location.
- Stay unlocked when holding or carrying your phone.

Tips:

- You can swipe up from anywhere on the screen when unlocking. You don't need to touch the icon.
- Some of these options aren't available if you added a VPN or a work (corporate) email account to your phone.

Unlock with trusted devices

Set up trusted devices

You can keep your phone unlocked when it is connected to a trusted device, like your Bluetooth watch or car.

1. Make sure you have:
   - Set a screen lock on the phone.
   - Turned on Bluetooth on the phone.
   - Paired your phone with the device.
2. Go to **Settings**.
3. Touch **Security & location** > **Smart Lock**.

   If you don't see Smart Lock, try the following:
   - Update Google Play services. In the Google Search widget on your home screen, search for "Google Play services", then touch the app to open it in Google Play.
   - Go to **Settings** > **Security & location** > **Advanced** > **Trust agents** and enable **Smart Lock**.
4. Unlock your phone, then touch **Trusted devices** > **ADD TRUSTED DEVICE**.

5. Touch a device to select it from the list of connected devices.

> **Tip:** If your device isn't in the list, make sure you are paired with it.

When the phone is connected to the device, the phone automatically unlocks.

Remove trusted devices

1. Go to **Settings**.
2. Touch **Security & location** > **Smart Lock**.
3. Unlock your phone, then touch **Trusted devices**.
4. Touch the device name, then touch **OK** to confirm.

Manually lock phone

If you need to make sure the phone stays locked even when you're connected to a trusted device, you can manually lock the phone.

On the lock screen, touch . The phone stays locked until the next time you manually unlock it.

Unlock at trusted places

Set up trusted places

To avoid repeatedly unlocking your phone when you are at familiar and trusted locations (like home or work), use a Smart Lock. You can still manually lock the phone at trusted places when needed.

1. Make sure you have:
   - Set a screen lock on the phone.
   - Turned on location services.
   - Entered your Home and Work locations in Maps (> **Your places**) if desired.
2. Go to **Settings**.
3. Touch **Security & location** > **Smart Lock**.

   If you don't see Smart Lock, try the following:
   - Update Google Play services. In the Google Search widget on your home screen, search for "Google Play services", then touch the app to open it.
   - Go to **Settings** > **Security & location** > **Advanced** > **Trust agents** and enable **Smart Lock**.
4. Unlock your phone, then touch **Trusted places**.
5. Set up your places:
   - If you added Home or Work locations in Maps, touch the location name and turn it on if desired.
   - To add a location, touch **Add trusted place**. Verify your current location to add it, or touch , type the address to add, and touch **Select this location**.

Manually lock phone

To lock your phone when you're in a trusted place, on the lock screen, touch . The phone stays locked until the next time you manually unlock it.

Remove trusted places

1. Go to **Settings**.
2. Touch **Security & location** > **Smart Lock**.
3. Unlock your phone, then touch **Trusted places**.
4. Remove the location from your trusted places:
   - For your Home or Work locations in Maps, touch the location name to toggle it off. To remove the address entirely, you must remove it in Maps.
   - For custom places you added, touch the location name, then touch .

Keep phone unlocked while it's on you

You can keep your phone unlocked while you're holding it in your hand or carrying it in your pocket or handbag. Just unlock it once, and it stays unlocked until you set it down (or manually lock it).

1. Make sure you have set a screen lock.
2. Go to **Settings**.
3. Touch **Security & location** > **Smart Lock**.

   If you don't see Smart Lock, try the following:
   - Update Google Play services. In the Google Search widget on your home screen, search for "Google Play services", then touch the app to open it.
   - Go to **Settings** > **Security & location** > **Advanced** > **Trust agents** and enable **Smart Lock**.
4. Unlock your phone, then touch **On-body detection**.
5. Turn it on.

Use fingerprint security

Set up fingerprint security

Use the fingerprint sensor to unlock your phone, make fast and secure online and in-store purchases, and sign into bank and finance apps.

1. Go to **Settings** > **Security & location**.
2. Touch **Fingerprint**.
3. Follow the onscreen instructions to scan your fingerprint using the sensor on the bottom front of your phone.

Fingerprints are stored securely on the phone.

Add more fingerprints

Keep in mind that:

- If multiple users share the phone, users should add their fingerprints from within their user profile, instead of adding multiple fingerprints to your owner profile.
- Anyone whose fingerprints are added to a user profile can unlock the phone and authorize purchases with the associated Google account or apps.

Add a fingerprint for each finger you want to use with the sensor:

1. Go to **Settings** > **Security & location**.
2. Touch **Fingerprint** and enter your pattern, PIN, or password to verify your identity.
3. Touch **Add fingerprint**.
4. Use the fingerprint sensor to scan another fingerprint.
5. Rename each fingerprint. Touch the current name, type a name, and touch **OK**.

Remove a fingerprint

1. Go to **Settings** > **Security & location**.
2. Touch **Fingerprint** and enter your pattern, PIN, or password to verify your identity.
3. Touch next to the fingerprint.

Use fingerprint to unlock phone

To wake and unlock your screen, or any time you see on the screen, touch the sensor to verify your identity.

Tip: You can temporarily turn off fingerprint unlocking and lock screen notifications with Lockdown mode.

Use fingerprint to sign in to apps

To use the fingerprint sensor with third-party apps:

- Be sure the app supports fingerprint recognition.
- Install the app and open its settings to adjust options, like enabling fingerprint unlock.
- Consult the app's help info for more instructions.

Why am I still asked for PIN/pattern?

For maximum security, you still need to enter your pattern, PIN, or password:

- Every time you power up your phone
- When more than 72 hours have passed since you last unlocked the phone
- When you go to **Settings** > **Security & location** > **Fingerprint**
- When the sensor can’t read the fingerprint

Fix a problem

Problem: Sometimes the sensor can't read my fingerprints.

Each finger has a unique print. If you've added only one fingerprint, add more for other fingers you want to use with the sensor.

The sensor may have trouble reading fingerprints if your finger is:

- Wet
- Oily
- Dirty
- Injured

If a registered fingerprint isn't working as expected, remove and re-add the fingerprint. If your finger is injured, add fingerprints for your other fingers and use them until healed.

Problem: Fingerprint option disappeared from Security & location menu.

After each troubleshooting step, check to see if your issue is fixed.

1. Turn your phone off and then on again.
2. Check if a software update is available for your phone.
3. Check for app updates.

   Open the **Play Store** app and touch ≡ > **My apps & games**.
4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

   If the sensor works correctly in safe mode, a 3rd party app is probably causing the issue. These apps can cause issues: lock screen apps, app locks that use the fingerprint sensor, RAM boosters, and RAM cleaners.
5. Reset the phone.

Use location services

About location information

You can let your phone use GPS, Wi-Fi networks, mobile networks, and sensors to estimate your location. Apps that have your permission can use this information to deliver location-based services, such as the ability to check in, view commute traffic, find nearby restaurants, or tag your photos with the location where you took them.

Turn location on or off

To control what location information your phone can use:

1. Go to **Settings** > **Security & location** > **Location**.
2. Turn it on or off to give or remove permission to use your location information. When it's off, your phone can't find your precise location or share it with any apps. However, turning this off disables many useful features and apps.

Tip: To add a Location tile to quick settings, open quick settings. Touch . Then drag the Location tile where you want it.

Review apps using your location

To see which apps have recently accessed your location:

1. Go to **Settings** > **Security & location** > **Location**.
2. Under Recent location requests, review the list of apps that have recently received your location.
3. To prevent an app from accessing your location:
   a. Touch **App-level permissions**.
   b. Turn **Location** off .

Review location services

1. Go to **Settings** > **Security & location** > **Location** > **Advanced**.
2. Touch a service to open its settings:
   - **Emergency Location Service**: Sends your location to emergency responders when you call or text an emergency number
   - **Google Location Accuracy**: Improves location accuracy for Maps and Find My Device.
   - **Google Location History**: Clear saved location details and turn location history on or off.
   - **Google Location Sharing**: View who's sharing your location, change sharing duration, and stop sharing.

Lock SIM card

Set up SIM lock

Your SIM card came with a default PIN from your carrier. You can use it to set up an optional SIM card lock, which prevents others from using your cellular plan and accessing account information if your phone is stolen.

If you add a SIM lock, you will be prompted to enter the PIN each time you swap SIM cards or restart the phone.

1. Be sure you have the PIN your carrier provided with the SIM card. If you don't have it, contact your carrier.
2. Go to **Settings** > **Security & location** > **Advanced** > **SIM card lock**.
3. If your phone has dual SIM cards, touch the SIM to lock.
4. Turn **Lock SIM card** on .
5. Enter your carrier-provided PIN and follow the onscreen instructions.

Unlock SIM card

When prompted, enter the PIN used to set up the SIM lock.

Caution: If you enter an incorrect PIN multiple times, the SIM will be disabled.

If you accidentally disabled SIM

If you enter an incorrect PIN multiple times, the SIM will be disabled.

Contact your carrier for a PIN unlock key (PUK) to re-enable the SIM.

Add or remove accounts

Add Google account

When you set up your phone, you were prompted to add a Google account. If you skipped this, be sure to set one up now so you can download apps from Play Store, get a customized information feed, and take full advantage of the Calendar, Gmail, and other apps included with your Google account.

To add a Google account:

1. Go to **Settings**.
2. Touch **Accounts** > **Add account**.
3. Touch **Google** and follow the onscreen instructions to add an existing account or to create a new one.
4. Once the account is added, Calendar, Contacts, and other account features and apps are updated with information from that account. You can review and change what syncs with your phone for that account.

Tip: Keep your apps up-to-date. To see if newer versions of the apps associated with your Google account are available, open the Play Store app and touch ≡ > **My apps & games**.

Add email or app account

Accounts are automatically added when you:

- Set up corporate email
- Set up personal email for non-Gmail addresses
- Install apps that require a username/password to log in, such as messaging, shopping, or streaming content

To review these accounts or add another:

1. Go to **Settings**.
2. Touch **Accounts** > **Add account**.
3. Touch the type of account to add and follow the onscreen instructions.

   If you don't see the type of account you want to add, install the related app from Play Store, then sign into your account through the app.
4. Once the account is added, account-related features and apps are updated with information from that account. To review and change what syncs with your phone, touch the account type, then account name.

Remove account

If you remove an account, information you synced will be removed from your phone, but it is not deleted from your account.

To remove an account:

1. Go to **Settings** > **Accounts**.
2. Touch the account name.
3. Touch **Remove account**.

Tip: If you have trouble removing a corporate account, go to **Settings** > **Security & location** > **Advanced** > **Device admin apps** and turn off the app for the account, then try to remove it again.

Sync accounts and apps

About syncing

You can manage how apps connected to your accounts are synced on your phone. Keep them all automatically up to date or just sync specific apps. You can also manually sync your data only when you need to.

The more you sync, the more battery your phone uses, so if you need to conserve, turn off sync for account features or apps you find less important. If you want to reduce usage of mobile data, turn off auto-sync entirely and instead sync accounts manually, or wait to sync manually over Wi-Fi.

Adjust auto-sync options for an account

1. Go to **Settings** > **Accounts**.
2. Touch the account name.

   by the account name means that some or all of the account's information is configured to auto-sync.

   by the account name means that the account will not auto-sync.
3. Touch **Account sync**.
4. Review the information and turn on/off types of account information to sync. For example, set your Google account to sync your Calendar and Gmail but not to sync for Drive.

When you turn off sync, the information is not removed from your phone; it just is no longer kept in sync with the version on the web.

Turn auto-sync off/on for all accounts

1. Go to **Settings** > **Accounts**.
2. Turn **Automatically sync data** on or off .

To collect messages, email, calendar, or other app updates, you must sync the accounts manually.

Sync manually

1. Go to **Settings** > **Accounts**.
2. Touch the account name.
3. Touch **Account sync** > > **Sync now**.

Fix a problem

If you're having problems, try these troubleshooting steps.

Manage information in your Google account

Google collects information from you to provide personalized services and tailored content, as outlined in the Google Privacy Policy.

You can review, delete, and control the information Google collects about you. Learn more from Google about:

- Viewing and controlling what information is collected (search, YouTube, recordings of your voice commands, location).
- Deleting your search history and other activity.

Record your IMEI number

The IMEI (International Mobile Equipment Identity) number is the unique code that identifies your phone. You'll need it if you contact support regarding a warranty, and it's important to have if your phone is stolen.

Service providers can use the IMEI to block a stolen phone from cellular networks, and many police departments keep a record of stolen phones using this number.

You may never need your IMEI number, but it's a good idea to record it, just in case.

To find the IMEI number:

1. Go to **Settings** > **System** > **Advanced** > **About phone**.
2. See **IMEI** for your number.
3. Record and save the number where you can easily access it.

You can also find your IMEI number by dialing ***#06#** in the Phone app. On some phones, the MEID HEX number is your IMEI number.

Find legal and product information

To view the electronic regulatory label for your phone, go to **Settings** > **System** > **Regulatory information**.

For safety, environmental, warranty, and other legal information, go to **Settings** > **System** > **Legal information**.

Printed legal information may also be provided with your phone.

To find your phone's model number, go to **Settings** > **System** > **Advanced** > **About phone** > **Model & hardware** > **Model(SKU)**.

Customize the keyboard

Quickly access keyboard settings

When you're typing, touch & hold the comma key and drag it to to customize your Gboard settings.

Change how keyboard looks

To change the background color of your keyboard:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Theme**.
3. Select a color to use as the background.
4. Touch **Apply**.

To adjust the keyboard's height for more comfortable typing:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Preferences** > **Keyboard height**.
3. Select the height you want.

Adjust keyboard sounds

To control whether your keyboard makes sounds:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Preferences**.
3. To hear sounds when you type, turn **Sound on keypress** on .
4. To adjust how loud the sounds are, touch **Volume on keypress**.

Adjust keyboard vibration

The onscreen keyboard vibrates when you touch a key. Turn off vibration feedback if you prefer not to use it or want to improve battery life.

To adjust keyboard vibrations:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Preferences**.
3. Do any of the following:
   - Turn **Haptic feedback on keypress** off or on.
   - If on, touch **Vibration strength on keypress** and move the slider.

Disable glide typing

With glide typing, you drag your finger over the letters in a word. If you want to turn this off and only use multi-touch typing:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Glide typing**.
3. Turn **Enable glide typing** off .

Limit or turn off suggestions

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Text correction**.
3. Adjust settings:
   - If you don't want predictions based on your previous word, turn **Next-word suggestions** off . You will only see suggestions for the current word you're typing.
   - If you don't want ANY suggestions, turn **Show suggestion strip** off .

Turn off auto-correction or spell check

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Text correction**.
3. Adjust settings:
   - If you don't want words corrected while you type, turn **Auto-correction** off .
   - If you don't want misspelled words to be underlined, turn **Spell check** off .

Use multiple languages

Change display language

You selected the language for your phone during set up. To change it:

1. Go to **Settings** > **System** > **Languages & input** > **Languages**.
2. Touch & hold the language you want and drag it to the first position in the list.
3. If you don't see the language you want, touch + to add it, then drag it to the first position.

   All languages added to the list will appear on the keyboard's spacebar.

To remove a language, go to **Settings** > **System** > **Languages & input** > **Languages**, then touch ⋮ > **Remove**, select the language, and touch 🗑.

Add language to keyboard

If you want a keyboard for a language that isn't a display language:

1. Go to **Settings** > **System** > **Languages & input** > **Virtual keyboard**.
2. Touch **Gboard** > **Languages**.
3. Touch **ADD KEYBOARD**.
4. Select the language.
5. Touch **Done**.

Then, switch between languages on the keyboard by touching .

Back up phone

Back up to Google

You can automatically back up the following items to your Google account:

- Apps and app data
- Call history
- Contacts
- Phone settings (including Wi-Fi passwords and permissions)
- Photos and videos (synced to your Google Photos library, not to Google Drive)
- SMS text messages (if using Messages)

Not all apps back up data automatically. Check with the app developer.

To automatically back up to Google Drive:

1. Go to **Settings** > **System**.
2. Touch **Backup**.
3. Turn **Back up to Google Drive** on .
4. If you have multiple Google accounts, touch **Account** to select an account.
5. Follow the onscreen instructions.

To back up other files that aren't automatically backed up, like attachments or downloads:

1. Open the Drive app.
2. Touch +.
3. Touch **Upload**, then choose the files or folder to upload.

Manage your backup in Drive

On your phone:

1. Open the Drive app.
2. Touch > **Backups**.

To learn about managing phone backups from a computer, read Google's help.

Restore backed up data

When you add your Google account to a phone, photos, contacts, settings and app data that you previously backed up to that account are restored onto the phone.

Share your phone

Ways to share your phone

- **Add users.** If you share your phone with family, friends, or within a business, you can set up separate user spaces for each of them.
- **Lend to people as guest.** This is a more temporary space that you or the guest can delete when finished.
- **Pin the screen.** This lets you keep one specific app or screen in view. For example, you can pin a game and your child cannot navigate anywhere else on your phone.

About owners, users, and guests

The owner can:

- Determine whether users and guests can make phone calls and send text messages, which also allows them to see the phone's call history and text history.
- Reset, update, and uninstall any apps.
- Delete user and guests, removing any associated accounts and data from the phone.

Users and guests can:

- Set up Google accounts and other types of accounts.
- Set up a screen lock.
- Customize the home screen and settings for their spaces.
- Add and delete apps for their spaces, and update any apps they use, regardless of who installed them.

Important: To prevent others from switching to your owner profile and accessing your information, set a screen lock before you share your phone with users or guests.

When sharing your phone with users and guests, some apps are only available to the owner, not to other users and guests.

Switch users

Only the owner can switch to the guest profile for loaning the phone and can switch between user profiles.

To switch user profiles or see which is currently active, open quick settings. At the top of the screen, you'll see one of these icons after you've set up a user or added a guest.

Icon	Meaning
	Owner (If you set up your profile in Contacts and included a picture, you'll see it and your name instead.)

Guest

Added user

Add, modify, remove users

Add a user

You must be the device owner to add users.

1. To prevent others from switching to your owner profile and accessing your information, set a screen lock before you share your phone.
2. Go to **Settings** > **System** > **Advanced** > **Multiple users**.

   Tip: To add users from quick settings on your lock screen without unlocking the phone, go to **Settings** > **System** > **Advanced** > **Multiple users** and turn **Add users from lock screen** on .

3. Touch **Add user** > **OK**.
4. Give the phone to the new user to set up the profile.

Restrict calls and messages

From your owner profile, you control whether users can call and send texts with your phone:

1. Go to **Settings** > **System** > **Advanced** > **Multiple users**.

   Or from quick settings, touch > **More settings**.

2. Next to the user name, touch .
3. To allow the user to make calls and send messages, switch on **Turn on phone calls & SMS**.

Remove a user

You can remove yourself as a user. You must be the device owner to remove other users.

1. Go to **Settings** > **System** > **Advanced** > **Multiple users**.

   Or from quick settings, touch > **More settings**.

2. Do one of the following:
   - To remove yourself as a user, touch .
   - To remove other users if you are the device owner, next to the user name, touch .
3. Touch **Remove user**.

Add or delete guest

Lend to guest

Create a temporary profile for sharing your phone with someone.

1. Go to **Settings** > **System** > **Advanced** > **Multiple users**.
2. If you want to prevent the guest from making calls, touch and switch **Turn on phone calls** off.
3. Touch **Guest**.
4. If you've lent your phone to a guest previously, touch **Start over** to clear the last guest settings, or touch **Yes, continue** to keep last guest settings.

End guest session

1. Go to **Settings** > **System** > **Advanced** > **Multiple users**. Or from quick settings, touch .
2. Touch **Remove guest** > **Remove**.

   All data from and apps installed during this session are deleted.

Phone is slow or unstable

Pinpoint the problem

What type of issue are you seeing?

- If your phone is slow when running all apps and tasks, it's probably a problem with your phone, not an app on your phone. Try the troubleshooting steps below.
- If the problem is specific to one app, try these app-specific troubleshooting steps.
- If you're using Wi-Fi and your phone is slow when you view websites or watch videos online, it could be a problem with your connection. Try using a different Wi-Fi network or contact your Internet Service Provider.

Troubleshoot phone performance

After each step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
   - Press and hold the Power button, then touch **Power off**.
   - If your phone is frozen, reboot it by pressing and holding the Power button for 7-10 seconds.
2. Check for system updates.

   Go to **Settings** > **System** > **Advanced** > **System updates**.
3. Check for app updates.

   Open the Play Store app and touch ≡ > **My apps & games**.
4. Check available storage and clear space if needed.

Phone feels warm or hot

Overview

It's normal for your phone to feel warm, or even hot, depending on how you're using it.

If your phone ever becomes too hot, it will ask you to turn it off so it can cool down. Some phones will stay on but limit the phone's capabilities until it cools down.

If your phone is too hot to touch, use a different phone, tablet, or computer to contact Motorola support.

Reasons your phone may get warm

Doing one or more of the following activities may cause your phone to get warm:

- Playing videos, games, or other media apps
- Using GPS navigation
- Tethering your phone or using it as a Wi-Fi hotspot

- Using phone while it's charging
- Downloading or uploading a lot of data

Ways to keep your phone from heating up

- Pause resource-intensive features or apps until your phone cools down.
- Always use the charger that came with your phone.
- Keep your phone away from direct heat or excessive sunlight.
- Don't keep your phone in enclosed or poorly ventilated areas where heat can easily build up.
- Reduce your phone's display brightness.

If you're not using or charging it

Sometimes a process can get stuck in the background. If your phone is hot but you're not using or charging it, turn your phone off and on again. This will stop the previously stuck process and resolve the issue.

Phone won't turn on

If your phone isn't starting, won't turn on, has a black or blank screen, or turns on but immediately turns off, try these steps to fix the issue.

1. Hold down your phone's Power button for 5-7 seconds, or up to 30 seconds.

   This should restart (or "reboot") your phone.

2. Charge the phone.

   If your phone has a sign-of-life indicator, look for a white light near the top front of the phone. This indicates that the phone is charging but battery is too low to power the screen.

   If you're having trouble charging, try these troubleshooting steps.

3. If you don't see a battery icon after you plug your phone in to charge, the issue could be with your screen. Check if your phone rings by calling it from another phone. If it rings, the issue is with your screen and you can try these troubleshooting steps.

4. Perform an external reset of your phone. Learn how.

Phone restarts or crashes

If your phone randomly reboots, restarts, or shuts down without restarting, try the following.

1. Restart your phone:

   a. Hold down the Power button for about 30 seconds.

   b. If this doesn't work, connect your phone to charge for at least 5 minutes. Then, while connected to the charger, restart again by holding down the Power button for 30 seconds.

2. Troubleshoot your phone:
   a. Check if a software update is available for your phone.
   b. Check available storage and clear space if needed.

      You may see issues if your phone's internal storage is almost full. To free up space, remove unnecessary files and clear cached data.
3. Troubleshoot your apps:
   a. Check for app updates.
   b. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

      If your problem doesn't go away in safe mode, restart your phone and continue to the next section.
4. Reset to factory settings:

   To remove any processes on your phone that may be causing the issue, you can reset your phone to factory settings.

   A factory data reset will remove all data from your phone.

Screen is frozen or won't respond

Tip: If your screen goes black when the phone rings so you can't answer the call, clear data for the Phone app.

If your phone freezes, stops responding, or is stuck on a blank or white screen, try the following:

1. Restart your phone. Hold down the Power button for about 30 seconds.
2. If this doesn't work, charge your phone for at least 5 minutes. Then, while connected to the charger, restart again by holding down the Power button for 30 seconds.

If your phone freezes again, check for a larger issue:

1. Restart your phone to unfreeze it.
2. Check if a software update is available for your phone.
3. Check available storage and clear space if needed.

   You may see issues if your phone's internal storage is almost full. To free up space, remove unnecessary files and clear cached data.
4. Check for app updates.

If you can't unfreeze the phone, reset your phone to factory settings, to remove any processes that may be causing the issue.

A factory data reset will remove all data from your phone.

SD card problems

Phone doesn't recognize new SD card

If your phone isn’t recognizing a new card that you inserted, try these steps. After each step, check to see if the issue is fixed.

1. Turn your phone off and then on again.
2. Inspect card for damage or alignment issue:
   a. Turn your phone off and remove the card. Inspect for damage. If not damaged, reinsert the card.
   b. Be sure the card sits completely in its slot and that the tray slides easily into the phone.
   c. Turn the phone on.
3. Check that the card is mounted:
   a. Go to **Settings** > **Storage**.
   b. If you see **Ejected** under the card name, touch the name then touch **MOUNT**.
   c. Turn your phone off and then on again.
4. Check that the card's type and capacity is compatible with your phone. If not, use a different SD card that meets the requirements.
5. Insert a different SD card to confirm that the issue is with the original card and not with your phone.

Phone can't format SD card

Try the following:

- Check that the card's type and capacity is compatible with your phone. If not, use a different SD card that meets the requirements.
- Try formatting the card using an SD card reader and an SD card formatter app on a Windows computer.

Phone stopped reading SD card

After each step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
2. Inspect card for damage or alignment issue:
   a. Turn your phone off and remove the card. Inspect for damage. If not damaged, reinsert the card.
   b. Be sure the card sits completely in its slot and that the tray slides easily into the phone.
   c. Turn the phone on.
3. Check that the card is mounted:
   a. Go to **Settings** > **Storage**.
   b. If you see **Ejected** under the card name, touch the name then touch **MOUNT**.
   c. Turn your phone off and then on again.
4. If the card is formatted as portable storage, use another device to check if the card is readable:
   a. Insert card into another device.
   b. If that device can read the card and files are present, back up files to your computer.

      This won't work for cards formatted as internal storage.

5. Check for errors with a USB SD card reader connected to a Windows computer:
   a. Insert the card into a USB card reader.
   b. Open My Computer, right-click on the SD card, and select **Properties** > **Service** > **Check disk for errors**. Depending on the size of your card and usage, this process could take up to an hour.
6. Reformat card using an SD card reader and an SD card formatter app on a Windows computer. Formatting the card erases all data on the card. Before you reformat, if you can access your SD card files from your PC, copy them to your computer. Then, use the SD card formatter app to format your card to FAT32.
7. Try a new SD card.

Apps can't view files on SD card

If none of your apps can view files on the card:

1. Install a different file manager app from Play Store. Use that app to check if files are visible on the card.
2. Check if files are visible using a Windows computer:
   a. Turn your phone off and remove the card.
   b. Put the card in the computer's SD card slot or a connected USB SD card reader.

If a specific app can't view files the card:

1. Open the app from which files are missing.
2. In the app's settings, set the storage location to be the SD card, not internal or phone memory.

Computer can't view files on SD card

After each troubleshooting step, check to see if your issue is fixed:

1. Use a USB cable that's capable of data transfer and isn't for charging only.
2. Be sure you have set the USB connection type to allow file transfer.

Problems making/receiving calls

After each troubleshooting step, check to see if your issue is fixed.

icon is missing

If disappeared from your home screen, you just need to add a shortcut for the Phone app.

SIM card not recognized

If you see or in the status bar or a message that the SIM is not recognized:

1. Turn your phone off and then on again.

   Press and hold the Power button, then touch **Power off**. Then turn it on to establish a new connection with the network.

2. Do one of the following:

   - If your phone allows one SIM card, turn your phone off, then remove and reinsert the SIM.
   - If your phone allows dual SIMs, disable the SIM, then enable it again. Go to **Settings** > **Network & internet** > **SIM cards**. Turn the SIM off . Then turn it on .

3. If your phone has dual SIMs, turn your phone off, then remove the SIM that is not recognized and try it in the other SIM slot.
4. Contact your carrier to make sure your account is set up properly.
5. Ask your carrier to replace the SIM card.
6. Perform an external phone reset.

No signal

1. If you usually have a signal but the status bar shows in your current location, move to another area where you can receive a signal, like outdoors. If you're uncertain whether your carrier provides service in that location, check the coverage map on your carrier's website.
2. If airplane mode is on, turn it off.
3. Turn your phone off and then on again.
4. Check for app updates.
5. Check if a software update is available for your phone.
6. Check that the **Preferred network type** is set to **Global**. (**Settings** > **Network & internet** > **Mobile network** > **Advanced** > **Preferred network type**.) If you're experiencing service issues when it is set on **Global**, try a different setting.
7. Remove your SIM card and reinsert.
8. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
9. Reset the phone.

Have signal, but can’t make calls

1. Turn your phone off and then on again.

   Press and hold the Power button, then touch **Power off**. Then turn it on to establish a new connection with the network.

2. Clear the cache for the Phone app.
3. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
4. Check if a software update is available for your phone.
5. Reset the phone.

Phone doesn’t ring or ring loud enough

1. Check your volume setting.
2. Look for in your status bar. If you see it:
   - Open quick settings and touch to turn Do Not Disturb off. Your phone will ring for incoming calls.
   - Make sure your phone is set to screen calls at the appropriate times.
3. Check that your ringtone is not set to **None**.
4. Is your phone connected with a Bluetooth device? If so, all audio is routed to the Bluetooth device.
5. If you're using a ringtone that you installed, try using a ringtone that came with the phone.
6. Use safe mode to see if apps you installed are causing the issue and uninstall as needed. Begin with application types like launchers, task killers, or anti-virus apps.

Can't answer ringing phone

1. Clear the data for the Phone app.

   Touch & hold , then touch > **Storage** > **Clear storage**.

2. Check that Phone app notifications haven't been disabled.

   Touch & hold , then touch > **Notifications** and make sure they are on .

Consistent busy signal

Outbound calls

1. If you hear a fast busy signal when you call a number, all cellular circuits may be in use, preventing the call from going through. Try calling again later.
2. If you hear a fast busy signal every time you call the same number, your number may be blocked by an app. Try calling from a different number.

Incoming calls

If you have a signal and can make calls, but callers tell you they consistently get a busy signal when calling you, check that you haven’t blocked their numbers.

Problems during calls

After each troubleshooting step, check to see if your issue is fixed.

Screen goes black

1. If you are using a case, cover or screen protector, remove it and see if it was causing the issue.
2. Check your proximity sensor.

   Dial a call and set the phone on a table (don't use speaker mode), then hold your hand over the proximity sensor to see if you can turn the screen off and on.
3. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

Calls are dropping

1. Check your signal strength:
   - Weak signal from your cellular provider is a common cause of dropped calls. In the status bar, see how many bars your network connection has. If you see only one or two bars, change locations to improve your signal strength, particularly if you are indoors.
2. Turn your phone off and then on again.

   Press and hold the Power button, then touch **Power off**. Then turn it on to establish a new connection with the network.
3. During a call, check that the proximity sensor works by covering it to confirm that it turns off your screen, preventing accidental touches during calls. You can also download an app to automatically lock your screen during calls; search for “call screen lock” on Play Store.
4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.
5. Check if a software update is available for your phone.
6. Reset the phone.

People can’t hear me on calls

1. Check that nothing is covering the microphone:
   - If you are using a case, cover or screen protector, remove it and see if it was causing the issue.
   - Check that the protective film that ships with the phone has been removed.
2. Check to see if your phone is using Voice privacy. (This feature is not available on all models.) Turn it off to see if sound quality improves:

   a. Touch .

   b. Touch > **Settings** > **Calls**.

   c. Turn off **Voice privacy**.
3. If the issue occurs while using the speakerphone or a Bluetooth headset, check your signal strength.

   In the status bar, see how many bars your network connection has. If you see only one or two bars, change locations to improve your signal strength, particularly if you are indoors.

4. Turn your phone off and then on again.

   Press and hold the Power button, then touch **Power off**. Then turn it on to establish a new connection with the network.

5. Check if a software update is available for your phone.

6. Turn off Voice Match.

   a. Open the Google app.

   b. Touch **More** > **Settings** > **Voice** > **Voice Match**.

   c. Turn **Access with Voice Match** off .

   Saying “OK, Google” won't work from all screens, but you can touch the search widget first, then say “OK, Google”.

7. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

8. Reset the phone.

Poor sound quality on calls

Start by checking your volume setting. You can only adjust the call volume with the Volume buttons while you’re on a call.

Wired headset

1. Make sure the headset is inserted completely into the headset jack.

2. If you are using a case or cover, remove it and re-insert the headset to see if it was interfering.

3. Try a different headset to determine if the issue is with the original headset.

Earpiece

1. Check that nothing is covering the microphone:

   - If you are using a case, cover or screen protector, remove it and see if it was causing the issue.

   - Check that the protective film that ships with the phone has been removed.

2. While in a call, try using the speakerphone or a wired headset to see if the sound quality improves. If it doesn’t, the issue is probably network signal strength instead of hardware.

3. Turn your phone off and then on again.

   Press and hold the Power button, then touch **Power off**. Then turn it on to establish a new connection with the network.

4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

5. Check if a software update is available for your phone.

6. Reset the phone.

Bluetooth device

Check battery level of Bluetooth device and phone, and charge if necessary. Bluetooth devices may disconnect or create noise when the phone or Bluetooth battery are low.

Can't make/receive calls

Try these troubleshooting steps.

Charging problems

If the phone charges slowly or will not charge, try these troubleshooting steps. After each step, check to see if your issue is fixed.

1. Make sure the USB plug fits securely into the phone.
2. If the battery has been completely depleted, connect the charger and wait about 10 minutes until it has enough voltage to charge, then press the Power button.
3. If you're charging by connecting to a wall outlet:
   - Use the charger that came with the phone.
   - Remove any case, to see if it's impeding the charger/port connection.
   - Inspect the charger for damange to the wire or plug. If you see damage, try charging by connecting to your computer with a USB cable.
   - If the outlet you're using is controlled with a switch, check that it is turned on.
   - Check the outlet for damage or loose parts. If you see damage, try another outlet.
4. If you're charging by connecting to your computer, check the USB connection:
   a. Swipe the status bar down.
   b. On the USB notification, touch ⌄, then touch the notification.
   c. Touch **No data transfer**.
5. Reboot the phone by holding the Power button for 7-10 seconds.
6. Reset the phone.

Battery drains too fast

Battery life varies

The way you use your phone can really affect how long you can go before recharging your battery. Navigating, playing games, browsing the web, making calls and texting all require energy. So, your battery life may vary day to day, depending on what you're doing.

If your battery is draining faster than expected

If your battery life seems shorter than usual, a quick and easy step is to reboot your phone, especially if you haven't turned it off in longer than a week.

1. Press and hold the Power button.
2. Touch **Restart**.
3. Plug your phone in and charge it normally.

Tip: You can adjust settings to extend your battery life.

Bluetooth problems

Bluetooth turning on automatically

Some third-party apps that control Bluetooth devices (smart watches, fitness and vehicle monitors, etc.) automatically turn Bluetooth on. If they do, this can prevent you from turning Bluetooth off.

To check if a third-party app you installed is automatically turning Bluetooth on, use safe mode to identify the problematic app, then uninstall it.

Can't pair

After each step, check to see if your issue is fixed:

1. First, check the basics.
2. Make sure the phone and Bluetooth device are in discovery mode.
3. Refresh the available devices list:
   a. Go to **Settings** > **Connected devices**.
   b. Touch **Pair new device**.
4. Check if a software update is available for your phone.
5. If you're having trouble pairing with your car, see the car manufacturer's instructions for your model.
6. Reset the phone's connections, then power cycle the phone.

Can't reconnect previously paired device

Unpair the Bluetooth device, then pair it again:

1. Go to **Settings** > **Connected devices** > **Previously connected devices**.
2. Next to the paired device, touch ⚙ > **FORGET**.
3. Pair the device again.

Can't hear music

After each step, check to see if your issue is fixed:

1. First, check the basics.
2. Check that the volume is up on your phone and car or Bluetooth device.
3. Check that other devices paired with your phone aren't playing the music.
4. Check that **Media audio** is on:
   a. Go to **Settings** and touch **Bluetooth**.
   b. Next to the paired device, touch ⚙.
   c. Make sure **Media audio** is checked.
5. If the problem is with a car, check the car's instructions.

Can't make or hear on calls

After each step, check to see if your issue is fixed:

1. Check that other devices paired with your phone aren't getting your calls.
2. Check that **Phone audio** is on:
   a. Go to **Settings** and touch **Bluetooth**.
   b. Next to the paired device, touch ⚙.
   c. Make sure **Phone audio** is checked.
3. If the problem is with a car, check the car's instructions.

Connection drops

After each step, check to see if your issue is fixed:

1. Check battery level on your phone and on the Bluetooth device and charge if needed. Bluetooth devices may disconnect or create noise when the phone or Bluetooth battery is low.
2. Adjust positioning:
   - Make sure you are wearing or positioning the device appropriately.
   - Keep metal objects, such as keys or coins, away from the phone and device to avoid interference.
3. Clear data for this system app:
   a. Go to **Settings** > **Apps & notifications**, then touch >.
   b. Touch ⋮ > **Show system**.
   c. Touch **Bluetooth** > **Storage** > **Clear storage**.

Paired device can't see contacts

Check that contact sharing is on:

1. Go to **Settings** > **Connected devices**.
2. Next to the paired device, touch ⚙.
3. Make sure **Contact sharing** is on.
4. Check and adjust sharing settings on the paired device or in the device's app.

Fix it: Check the basics

After each step, see if your issue is fixed:

1. Check battery level on your phone and Bluetooth device, and charge if either is low.
2. Keep the phone and Bluetooth device within 30 feet of each other, closer for better performance.
3. On your phone, turn Bluetooth off and then on again.
4. Turn off the Bluetooth device to disconnect it. Then turn it back on to automatically reconnect with the phone.
5. Power cycle both your phone and the Bluetooth device.

If that doesn't fix it, follow the steps for specific problems in the sections above.

Wi-Fi problems

After each troubleshooting step, check to see if the issue is fixed.

Can't connect to a network

1. When you enter the password to connect:
   - Get the password from the Wi-Fi router and make sure you enter it correctly on your phone.
   - If the **CONNECT** button is greyed out, the password you entered isn't long enough. Confirm the router's password and re-enter it on your phone.
2. Check if a software update is available for your phone.
3. Check that the Wi-Fi router firmware is up to date.
4. Reset the phone's network connections.
5. Reset the phone.

Connection drops

After each troubleshooting step, check to see if the issue is fixed.

1. Turn off Wi-Fi scanning.
2. Set Wi-Fi to always remain connected, even when the phone sleeps.
3. Forget the network connection. Then set up the Wi-Fi connection again.
4. Check if a software update is available for your phone.
5. Restart your wireless router by unplugging it from the power outlet for about 30 seconds and then plugging it back in. Once the wireless router is running again, try to reconnect.
6. On a computer, log into your router and try adjusting one or more of these router settings:
   - If the router has multiple bands, disable the lower band.
   - Change the encryption/security setting of the SSID from WPA-password to WPA-PSK.
   - Don't use automatic channel selection. Instead, assign a fixed channel, such as Channel 6.
7. Reset the phone's connections.

Hotspot problems

If you can't connect a computer or tablet to your phone's Wi-Fi hotspot:

1. The cellular network for your phone may not be in range. Check the signal icon in your status bar to ensure you have strong connection. If not, try these troubleshooting steps.
2. Re-enter the password on the device to match the hotspot password set up on your phone. Make sure that the encryption type and security settings match on the device and your phone.

3. Disconnect and then reconnect:
   a. Turn off the connection from your device.
   b. Turn off the phone's hotspot.
   c. Restart your device.
   d. Wait for 1 minute, then turn on and enable the hotspot on your phone.
   e. Reconnect the device.

If you've connected a computer or tablet but can't access certain web sites:

1. Power cycle your computer or tablet.
2. Make sure the browser version is up to date.

Can't transfer files or connect to computer

If you're having problems using a USB connection to connect your phone to your computer, try these troubleshooting steps.

Check your computer

Windows computer

1. Check your computer's settings to make sure that Windows automatically detects new hardware.
2. Restart your computer.

Mac computer

- Check that your computer is running Mac OS X 10.5 and up.
- Check that your computer has Android File Transfer installed and open.
- Restart your computer.

Check your phone

1. Check if a software update is available for your phone.
2. Hold down your phone's Power button for 5-7 seconds, or up to 30 seconds.

Check your USB connection

1. Try a different USB cable. Not all USB cables can transfer files.
2. To test the USB port on your phone, connect your phone to a different computer.
3. To test the USB port on your computer, connect a different device to your computer.

Forgot unlock code

If you forgot your PIN, pattern, or password for unlocking your screen, you need to erase your phone, set it up again, and set a new screen lock.

1. Make sure you know your Gmail address and password, which you'll need when setting up the phone. If you've forgotten them, use Google's website to retrieve them.
2. Perform an external reset of your phone.

Can't sign in to Google

If you've forgotten the Gmail address and password for your Google account:

1. Visit Google's website to reset the password.
2. On a computer, log in to Gmail and confirm that the new password works.
3. Wait 24 hours after changing your password before resetting your device. For security, you can't use an account to set up a phone after reset if that password changed within 24 hours.

Account sync issues

If your account is having problems syncing, you may see a message or an icon.

In most cases, these issues are temporary and your account will sync again after a few minutes. If you keep having sync issues, try the solutions below.

Sync account manually

1. Go to **Settings** > **Accounts**.
2. Touch the account to sync.
3. Touch **Account sync**.

If your phone syncs, your issue is fixed. If not, try the troubleshooting solutions below.

Basic troubleshooting

After each troubleshooting step, try manually syncing to test if sync works.

1. Check that auto-sync is on.
   a. Go to **Settings** > **Accounts**.
   b. Touch the account.

      by the account name means that some or all of the account's information is configured to auto-sync.

      by the account name means that the account will not auto-sync.

2. Make sure your Internet connection works.

   For sync to work, you need an Internet connection. To test if your connection is working, open a browser and load a website. If the website doesn't load, get help connecting to Wi-Fi or to cellular data.

3. Check if you have account issues.

   For sync to work, you need to be able to sign in to your Google account. Make sure that you can sign in to your account in other ways and on another device. For example, try checking your Gmail with your computer's browser.

   - If you can sign in, the issue is with your phone. You can move on to the next solution.
   - If you can't sign in, your account may have an issue.

4. Check if a software update is available for your phone.

Advanced troubleshooting

After each troubleshooting step, try manually syncing to test if sync works.

1. Remove and re-add your account.
2. Clear cache and data for the Contacts app.

   a. If you've saved any contacts since you last synced, back them up. Open the **Contacts** app and touch ≡ > **Settings** > **Export**, then export to a VCF file and email the file to yourself.

   b. Clear the cache and data for the Contacts app.

   c. Download the VCF file that you emailed to yourself, then import those contacts (**Contacts** > ≡ > **Settings** > **Import**).

App or widget problems

App or widget missing from home screen

If a widget disappeared from your home screen, then add the widget by touching & holding an empty spot on your home screen.

If an app disappeared from your home screen, the shortcut for opening the app was removed and you just need to add a shortcut.

If an app disappeared from your list of all apps, you need to reinstall it.

App crashes, won't open, or isn't working

After each step, check to see if the issue is fixed:

1. Turn your phone off and then on again.

   Press and hold the Power button, then touch **Power off**.

2. Check that you have not disabled permissions for the app. If any permissions are turned off, turn them on and try using the app again.
3. Update the app.
4. Force stop the app. This completely shuts down the app, including any background services that may be causing your issue.
5. Clear the app's cache. This frees up space by removing temporary files.
6. Clear the app's data. This erases all data saved in this app.
7. Contact the app's developer.
   a. Open the Play Store app.
   b. Touch ≡ > **My apps & games**.
   c. Touch the app and swipe down to see contact information.
8. If all else fails, delete the app.

Tip: To figure out which third-party app is causing performance problems, use safe mode.

App disabled in safe mode

If apps are disabled because you're in safe mode, you can't use them until you exit safe mode.

To exit safe mode, turn your phone off and then on again.

Problems with Play Store

For help with Play Store, read Google's troubleshooting information.

Problems with Gmail

For help with Gmail, read Google's troubleshooting information.

Problems with app you installed

After each step, check to see if the issue is fixed:

1. Check for updates to the app.
2. If you can open the app, touch ≡ or ⋮ > **Help** and look for troubleshooting information.
3. Clear the app's cache.
4. Go to the developer's website for support.
   a. Open the Play Store app.
   b. Touch ≡ > **My apps & games**.
   c. Touch the app and swipe down to see a link to the website.

Messaging problems

If you're having problems sending or receiving messages, try the following:

1. Check for updates to your messaging app.
2. Check if a software update is available for your phone.
3. Turn your phone off and then on again.
4. If the problem persists, follow the steps below for specific problems. After each troubleshooting step, check to see if your issue is fixed.

Red ! on text message

If you see ⚠, your text message was not sent.

1. Check your signal strength:
   - Weak signal from your cellular provider is a common cause of unsent messages. In the status bar, see how many bars your network connection has. If you see only one or two bars, change locations to improve your signal strength, particularly if you are indoors.
2. Open the conversation and resend the message.

Can't hear notifications

1. Adjust your notification settings.
2. If you're using a 3rd party launcher, try switching back to the Moto launcher. If this fixes the issue, then find an alternative launcher to use.

Can't send or receive messages

1. Change your preferred network to **Global**.

2. If you recently switched from iPhone and are having trouble sending messages to or receiving them from an iPhone, your phone number may still be associated with iMessaging. You need to deregister your account.
3. Contact your carrier.

Can't send or receive pictures or videos

Your data plan must support MMS (multimedia messaging) and cellular data must be on.

Messages app stopped

1. Check that you have not disabled permissions for the Messages app. If any permissions are turned off, turn them on and try using the app again.
2. Force stop the app. This completely shuts down the app, including any background services that may be causing your issue.
3. Uninstall any recent app updates.

   Touch & hold , then touch **App info** > > **Uninstall updates**.
4. Clear the app's cache. This frees up space by removing temporary files.
5. Reset the phone.

Keyboard not working

If your keyboard has problems, like a missing spacebar:

1. Check for updates to your keyboard app.
2. Turn your phone off and then on again.
3. Clear the cache for the keyboard app.

Problems with Facebook, WhatsApp, other apps

If you're having problems with messaging apps that you installed:

1. Check for updates to the app.
2. If you can open the app, touch or > **Help** and look for troubleshooting information.
3. Turn your phone off and then on again.
4. Clear the app's cache.

Camera problems

Photo looks blurry

Wipe the lens clean with a soft, dry cloth and retake the photo.

If new photos still look blurry:

- Increase resolution (photo size) in the Camera app. A smaller photo size results in lower image quality.

- Avoid zooming when taking a photo. Pixelation always occurs when you zoom a digital photo. If you use zoom during the shot itself, pixelation will be more evident.
- If you're indoors and taking a panoramic photo, switch to regular mode. Panorama works best for outdoor shots; the algorithm that stitches the images together isn't optimized for indoor, up-close shots.

Accidentally deleted photos

You can try to recover recently deleted photos.

If recovered, be sure to back up your photos to the cloud.

Can't delete photo

If a photo or video you deleted comes back, check if it's on your SD card. To delete it, use the Files app. (If you don't have this app, download a file manager app and use it to delete the photo from your card.)

Or, remove your card from the phone and use a computer to delete photos from the card.

WhatsApp camera issues

If you installed WhatsApp and have problems taking photos or videos with it:

1. Check for updates to the app.
2. Clear the app's cache.
3. If the problem continues, open WhatsApp, touch ⋮ > **Settings** > **Help**, and search for information about your issue.

Error: Please restart camera

After each troubleshooting step, check to see if the issue is fixed:

1. Turn your phone off and then on again.
2. Clear the cache for the Camera app.
3. Check for updates to your Camera app.
4. Use safe mode to see if apps you installed are causing the issue and uninstall as needed.

   If the camera works correctly in safe mode, a third-party app is probably causing the issue.
5. If you're storing photos/videos on your SD card, remove the card and see if you can take photos without getting the error. If so, replace the SD card with a new card. Make sure the new card is certified A1 and has a fast write speed.

Error: Camera busy

This error can occur if you use the camera in one app and then switch to another app that requires permission to access the camera.

After each troubleshooting step, check to see if the issue is fixed:

1. Turn your phone off and then on again.

2. Check which apps have permission to access the camera.

   Settings > **Apps & notifications** > **Advanced** > **App permissions** > **Camera**

   Review the list of the apps on your phone that request camera access and remove access for apps that look suspicious or that you don't use.

3. Clear the cache and data for the Camera app.

Error: Trash is full

If you're getting messages about the trash being full:

1. Open the **Photos** app.
2. Touch ☰ > **Trash**.
3. Touch ⋮ > **Empty trash**.

Update Android software

For best performance, keep your phone updated with the latest available Android software.

Check Android version number

To check what version of Android your phone is running:

1. Go to **Settings** > **System** > **Advanced** > **About phone** > **Android version**.
2. The number displayed is your phone's Android version.

Get Android software updates

Your phone notifies you if an Android software update is available.

To manually check for updates, go to **Settings** > **System** > **Advanced** > **System updates**.

If an upgrade is available, follow the onscreen instructions to install it.

Tip: To save data charges, use a Wi-Fi connection to download software updates.

You can't downgrade to a previous software version after installing an update.

Timing for updates

There are two types of updates:

- **Security updates**, which contain fixes and improvements from Google for your current version of the Android operating system. Motorola provides these updates to most phones on a regular basis.
- **Android OS updates**, which are new versions of the Android operating system. Motorola provides OS updates from Google to eligible phones as soon as possible.

To see if an OS update will be available for your phone, or if your phone is still eligible for security updates, see the software update website for your country. Our support agents get their Android update information from here too. If the website doesn't have a update release date for your phone, then we don't know the release date yet.

For Android OS updates, with several phone models, regions, and distribution channels we may have hundreds of software versions to test before releasing an update to your phone. Because dependencies on carriers and other key partners for certifications, independent testing, and requests for changes take more time, all phone owners don't receive updates at the same time, even in the same region.

Reset Wi-Fi, cellular data, and Bluetooth

If you're having problems with connections, review this information first:

- Wi-Fi
- Bluetooth
- Cellular data
- Hotspot (internet sharing)

Then, if you're still experiencing problems, try resetting all network settings:

1. Go to **Settings** > **System** > **Advanced** > **Reset options**.
2. Touch **Reset Wi-Fi, mobile & Bluetooth** > **RESET SETTINGS**.
3. If you're using dual SIMs, select the SIM to reset for mobile data settings.
4. Touch **RESET SETTINGS**.
5. Try to reconnect to Wi-Fi, cellular data, and Bluetooth, or try to share your internet connection again.

Reset phone

What a reset does

Resetting your phone erases all data and brings it back to out-of-the-box condition. This data will be erased from the phone:

- Google account
- Media (music, photos, videos)
- System settings and data
- App settings and data (including text messages)
- Downloaded apps

Before you reset

1. Back up your data.

   If your phone works and you can unlock it:

   - If you aren't automatically saving your photos and videos to your Google Photos library, back them up now or copy them to a computer.
   - Make sure that any changes you made to contacts or calendar are synced to an account.

2. Make sure you have your security information:

   - The username for a Google account on your phone. (**Settings** > **Accounts**)
   - The password for that Google account. If you've forgotten the password, you can reset it. Wait 24 hours before resetting the phone if you reset your password.
   - If you set a screen lock, make sure you know the PIN, pattern, or password.

   To restore your data after resetting, you'll need to enter security information. This shows that you or someone you trust did the reset and helps prevent others from using your phone without permission.

Reset phone from Settings

To erase all data and reset your phone:

1. Go to **Settings** > **System**.
2. Touch **Advanced** > **Reset options** > **Erase all data (factory reset)**.

Reset phone if you can't open Settings

If you can’t open Settings, do an external reset.

1. Charge your battery 30% or more.
2. Turn off the phone.
3. Press and hold the Volume Down button and the Power button at the same time until the phone turns on.
4. Press the Volume Down button until you see Recovery mode.
5. Press the Power button to restart in Recovery mode.
6. Use the Volume buttons to scroll to **Wipe data/factory reset**, then press the Power button to select it.
7. Use Volume buttons to scroll to **Yes**, then press the Power button to select it.

   Allow several seconds for the reset to complete.
8. Use Volume buttons to scroll to **Reboot system now**, then press the Power button to select it.

   Allow several minutes for the reboot to complete. If the phone doesn't finish rebooting, press & hold the Power button until the screen turns dark, then release it to power up normally.
9. If you reset your phone because you suspect a third-party app is causing problems, when you set up the phone again, be sure you don't copy all apps. Restore one app at a time and use the phone for a while. If the phone has no issues, install the next app and retest.

Get more help

Issue	Where to get help
Billing or cellular network issues	Contact your carrier.
Learn to use an app	Open the app and touch ⋮ or ≡ > **Help**.
Phone issue	Visit mobilesupport.lenovo.com for solutions, user forums, live contact options.