

Learner Full Name: _____ School: _____
Assigned Workstation: _____ Class: _____

Session 32: Smartphones & Tablets

In most Ghanaian homes, the first "computer" anybody owns is a phone. Your mother pays for electricity with it, your uncle checks the football scores on it, and your grandmother talks to family abroad on it. Today you will learn to use a smartphone or tablet like an expert: change its settings, install apps safely, save data, share internet, find your way with maps and keep the family's Mobile Money safe.

1. Plain Talk: A Whole Market in Your Pocket

A **smartphone** is a small computer that can also make calls. A **tablet** is the same thing with a bigger screen (and often no SIM card for calls). Both have a processor, memory and storage, just like the computers you met in Session 6.

Think of a busy market like Makola or Kejetia. At the entrance you can see the stalls; you walk to the one you need (the tailor, the fish seller, the phone repairer). A smartphone works the same way. The **home screen** is the market entrance, and every **app** is a stall that does one job: a torch, a calculator, a radio, a camera, a map, even a bank counter.

💡 MOST PHONES IN GHANA RUN ANDROID

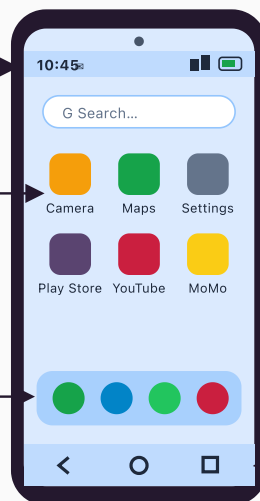
In Session 8 you met operating systems. Most phones here (Samsung, Tecno, Infinix, itel, Nokia and others) run **Android**, made by Google. iPhones and iPads run **iOS** and **iPadOS**, made by Apple. This session teaches Android, with notes on how iPhones differ. Every brand looks slightly different, but the ideas are the same.

2. The Android Home Screen

Ⓢ **Status bar**
time, notification icons, signal, Wi-Fi and battery

Ⓢ **App icons**
tap once to open an app;
press and hold for more options

Ⓢ **The dock**
favourite apps that stay on every home screen page



Ⓢ **Swipe down from the top**
once: notifications
twice: Quick Settings

Ⓢ **Swipe up from the bottom**
opens the app drawer: a list of every app on the phone

Ⓢ **Navigation**
◀ Back ○ Home ◻ Recent apps
(newer phones use swipe gestures)

Figure 32.0: The parts of an Android home screen. Your phone's layout and icons may look slightly different.

1. Quick Settings: The Light Switches

Swipe down from the top of the screen twice to open **Quick Settings**. Each tile is like a light switch: tap it to turn something on (the tile lights up) or off. **Press and hold** a tile to jump to its full settings.

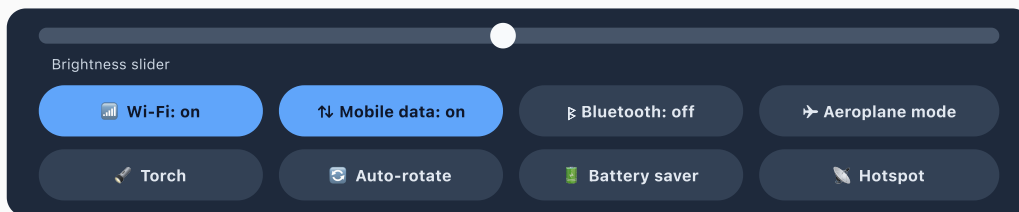


Figure 32.1: Quick Settings. Blue tiles are on; dark tiles are off. Tap the pencil (Edit) button to choose which tiles appear.

2. A Tour of the Settings App

For everything else, open the **Settings** app (the grey gear ⚙️). Samsung calls some sections by different names, shown in brackets.

Settings section	What you can do there
Network & internet (Samsung: Connections)	Join a Wi-Fi network, turn mobile data on or off, see how much data each app used, turn on Data Saver and the hotspot.
Connected devices (Samsung: Connections)	Turn on Bluetooth and pair a speaker or earbuds, just like the headset in Session 7.
Display	Brightness, dark theme, font size, and screen timeout (how fast the screen goes dark).
Sound (and vibration)	Ringtone, volume, vibrate, and Do Not Disturb for homework time.
Storage	See what is filling the phone: photos, videos, apps, WhatsApp files.
Battery	See which apps use the most power, and turn on Battery Saver.
Security (and privacy)	Set a screen lock : a PIN, pattern, password or fingerprint.

ALWAYS USE A SCREEN LOCK

A phone with no lock is like a house with the door wide open: anyone who picks it up can read the messages and open the MoMo app. Use a PIN of at least 6 digits or a fingerprint, never **1234**, **0000** or your birthday, and don't let friends watch you unlock it.

Android

Swipe down from the top for Quick Settings. Apps come from the **Google Play Store**. Settings → Network & internet → Hotspot & tethering (Samsung: Connections → Mobile Hotspot and Tethering).

iPhone and iPad (iOS)

Swipe down from the top-right corner for **Control Centre** (on iPhones with a Home button, swipe up from the bottom). Apps come from the **App Store**. Settings → Personal Hotspot.

Your turn: Kofi's phone screen goes dark after 15 seconds while he reads. Which setting should he change, and where is it?

1. Before You Press Install: Developer, Downloads, Reviews, Data safety

Only install apps from the official store: the **Google Play Store** on Android, or the **App Store** on iPhone. Fake apps copy the name and logo of popular apps to steal money or data, so do these 4 checks before you tap **Install**:

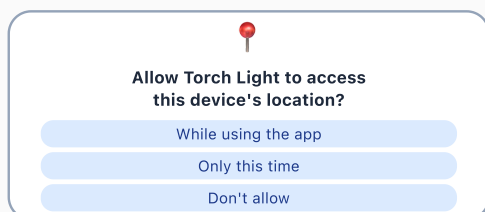
- 1 **Developer:** under the app's name. Is it the real company? (The real WhatsApp is from *WhatsApp LLC*, not "WhatsApp Free Gold Edition".)
- 2 **Downloads and rating:** a popular app has many downloads and a good star rating. A copy may have very few.
- 3 **Reviews:** read some of the newest reviews, not just the stars. "It stole my data" is a red flag.
- 4 **Data safety:** scroll to the *Data safety* section to see what the app collects and shares. Does it need all that?

⚠ NEVER INSTALL APPS FROM A WHATSAPP LINK

Messages like "Download this app to get free data!" often send an **APK** file: an Android app from outside the Play Store. Android warns you before it will install one. Such apps can hide viruses or steal MoMo details. If you see a warning, press **Cancel** and tell an adult.

2. App Permissions: Who Gets the Keys?

A **permission** is your "yes" or "no" when an app asks to use part of your phone, such as the camera, microphone, location or contacts. Android lets you choose:



ASK: DOES THIS APP NEED IT?

- ✓ Maps wants your location: yes, to give directions.
- ✓ Camera app wants the camera: of course.
- ✗ A torch app wants your location: why?
- ✗ A game wants your contacts: say no.

Figure 32.2: A permission request. If the reason doesn't make sense, choose *Don't allow*. You can change it later in *Settings → Apps → (the app) → Permissions*.

3. "Storage Full!" How to Free Space

🧹 Clear out

- Uninstall apps you never use.
- Delete WhatsApp videos and voice notes you don't need (WhatsApp → Settings → Storage and data → Manage storage).
- Empty the photo app's bin.

☁ Back up first

Photos can be backed up to the cloud (for example in **Google Photos**), as in Session 30. Back up **on Wi-Fi**, check they are safe, then free space on the phone.

1. Where Does My Data Bundle Go?

Mobile data is internet from the phone network, paid for with a **data bundle**. **Wi-Fi** is internet from a router (at home, school or the Hub) and does not use your bundle. Some things use far more data than others:

Uses a LOT of data 🚫	Uses some data ⚠️	Uses very little ✅
Watching videos (YouTube, TikTok): an hour can use 1 GB or more; video calls (WhatsApp, Meet)	Voice calls on WhatsApp	Text messages on WhatsApp
App and phone updates; backing up photos and videos	Scrolling social media with pictures	Checking email (without big attachments)

💡 SIX WAYS TO MAKE A BUNDLE LAST

1. Use Wi-Fi when you can.
2. Turn on **Data Saver** (Settings → Network & internet → Data Saver; Samsung: Connections → Data usage → Data saver). Turn Data Saver off before you switch on a hotspot.
3. Set the Play Store to update apps over Wi-Fi only.
4. Back up photos on Wi-Fi only.
5. Watch videos at a lower quality.
6. Turn mobile data off when you are not using it.

2. Sharing Internet with a Hotspot

A **hotspot** turns a phone into a little Wi-Fi router, so a laptop can use the phone's data. Find it in Quick Settings, or Settings → Network & internet → Hotspot & tethering (Samsung: Connections → Mobile Hotspot and Tethering).



Figure 32.3: A hotspot. The laptop joins the phone's Wi-Fi, but every megabyte comes from the phone's data bundle.

Hotspot rules: set a strong hotspot password (never leave it open), share it only with people you know, watch the bundle (a laptop can download big updates quickly) and **turn the hotspot off** when you finish, because it also drains the battery.

3. Mobile Money: Protect the Family's Wallet

✉️ A typical scam message

From: 0551234567
 "You have received GHS 500.00 from Kwame A. New balance GHS 512.40." Then a call: "Sorry, I sent it to you by mistake. Please send it back quickly!"

✅ What a smart family does

The real message comes from the network's official name, not an ordinary number. **Check the balance yourself** in the network's official MoMo menu or app. If no money came in, it is a scam: send nothing.

🔴 THE GOLDEN MOMO RULES

1. **Never share the MoMo PIN** with anyone, not even someone who says they work for the network. The network will **never** call or text to ask for it.
2. "You have won a prize! Send a fee to claim it" is always a scam.
3. Never approve a payment request you did not start.
4. If something feels wrong, stop, tell a parent, and call the network's official customer service number to report it.

1. Lab Mission: Explore a Real Phone or Tablet

Work in pairs with one of the Hub's phones or tablets (or a parent's phone, **with their permission**, at home). First warm up in the **Smartphone Explorer** 3D lab on your session page: change settings, install an app safely, free up storage, turn on a hotspot and spot a Mobile Money scam. Then do the same on the real device. **Don't change anyone's passwords, and don't open MoMo or messages.**

- 1 Quick Settings:** swipe down twice. Turn the torch on and off. Press and hold the Wi-Fi (or Internet) tile and write down the name of the network the device is using.
- 2 Detective work in Settings:** open *Battery* and *Storage*. Write down the battery level, how much storage is used and free, and which kind of file takes the most space.
- 3 Check one app's permissions:** Settings → Apps → choose the Camera or Maps app → Permissions. Which permissions does it have?
- 4 Inspect an app (don't install it):** open the Play Store and search for *Google Classroom*. Write its developer, rating and number of downloads, then go back.
- 5 Maps:** open Google Maps, search for a place near the Hub (a market, a hospital or a school), tap **Directions** and choose the walking 🚶 icon. How long would the walk take?
- 6 Camera:** photograph an object on your desk (no faces). Hold the phone steady, tap the object to focus, then take one photo upright and one sideways (landscape). Delete them when your mentor has seen them.

What I found	My answer
1. Wi-Fi network name	-----
2. Battery level / storage used and free	-----
2. What takes the most space?	-----
3. The app's permissions	-----
4. Developer / rating / downloads	-----
5. Place searched and walking time	-----

📍 SHARING YOUR LOCATION

Google Maps can share where you are, live (tap your profile picture → *Location sharing*). Only ever share it with your own family, and only with a parent's agreement. Never share your live location with a stranger or in a public post.

1. Scenario Decisions: Smart or Risky?

Phone Scenario	Smart 	Risky 
A WhatsApp message says "Install this app for free 20 GB data" with a link to download an APK file. Esi taps it.	☐	☐
Before installing a game, Yaw checks the developer, the reviews and the Data safety section in the Play Store.	☐	☐
A caller says he works for the network and needs Mum's MoMo PIN to "fix her account". Akosua reads it out to him.	☐	☐
Selasi shares his phone's hotspot with his sister's laptop, sets a password and turns it off when she finishes.	☐	☐
A calculator app asks to read Naa's contacts and location. She taps "Allow" so it stops asking.	☐	☐

2. Written Review Questions

Question 1: Name two things that use a lot of mobile data, and two ways to make a data bundle last longer.

Question 2: Someone calls Grandpa: "I sent GHS 300 to your MoMo by mistake, please send it back." What should he do first, and why?

3. Self-Assessment & Mentor Sign-Off

Tick the column that reflects your confidence at the end of Session 32:

Smartphone Competency	With Help	Almost Alone	All By Myself!
1. I can use the home screen, Quick Settings and the Settings app.	☐	☐	☐
2. I can check an app and its permissions before and after installing it.	☐	☐	☐
3. I can save data, free storage and share a hotspot safely.	☐	☐	☐
4. I can use Maps and the camera, and spot a Mobile Money scam.	☐	☐	☐

Mentor Signature: _____

Date Completed: _____