# TECHNICAL ENGLISH

# WORKGUIDE #3

# WEEK #1

**12TH GRADE**

**TEACHER:**

Ricardo Alfaro Brenes

**STUDENT: _____**

**GROUP: _____**

**Scenario:** Web Tools

**Theme:** Mobile Digital Technologies

# **Week 1:** Introduction to the Mobile World & Device Characteristics

**Focus:** Understanding the ubiquity of mobile devices and their basic hardware/software characteristics.

**Learning Indicators Addressed:**

- **Listening:** Follow a straightforward presentation or demonstration about the characteristics of mobile devices such as screen orientation, display calibration.
- **Reading:** Find and understand relevant information about mobile devices such as touchscreens and their characteristics.

**Essential Question Link:** Initial exploration of how mobile tech has *already* changed the world and opened opportunities.

**Task 1. Discussion.** "Mobile Device Show and Tell." Students briefly share what mobile devices they use and their single most used app. Discuss why.

**Task 2. Reading.** Prezi Presentation: "The Evolution of Mobile Devices". Then discuss the following question.

***How has the evolution you just saw changed how people access information and services?***

**Task 3. Listening.** Watch the following video and answer the questions from the next page.

## Link: https://www.youtube.com/watch?v=Kb-jnFWNyg0

**1. What is the first step to make a Samsung Android phone easier for seniors to use?**
a. Turn on airplane mode
b. Download a new app
c. Turn on easy mode
d. Change the wallpaper

**2. Which mode should be turned off to help seniors navigate their phone more easily?**
a. Airplane mode
b. Gesture navigation mode
c. Dark mode
d. Battery saver mode

**3. What is the purpose of increasing the text size on a phone?**
a. To make the phone look more modern
b. To make it easier for seniors to read
c. To save battery life
d. To increase storage space

**4. What feature allows you to adjust the keyboard size on an Android phone?**
a. Keyboard shortcuts
b. Voice typing
c. Font style
d. Keyboard height

**5. Which launcher is recommended in the video for seniors?**
a. Simple Launcher
b. Google Launcher
c. Nova Launcher
d. Microsoft Launcher

**6. What can seniors do with the secondary screen in the recommended launcher?**
a. Play games
b. Customize contacts
c. Change settings
d. Access social media

**7. What essential feature does the recommended launcher include for emergencies?**
a. SOS button
b. Voice assistant
c. Flashlight
d. Photo gallery

**8. What should you do after installing a senior-friendly launcher?**
a. Restart the phone
b. Customize the interface
c. Delete all apps
d. Change the phone color

**9. What is the main focus of the video?**
a. How to uninstall apps
b. Making Android phones easier for seniors to use
c. How to upgrade the phone's software
d. Exploring new phone features

**10. How can viewers support the creator of the video?**
a. Share their own videos
b. Leave a negative comment
c. Like, subscribe, and share
d. Ignore the video

**Task 4. Reading.** Read the Social Customer Service infographic following the teacher's directions.

# 📱 How Do Touchscreens Work?

Touchscreens are displays that allow users to interact directly with what is shown, eliminating the need for devices like a mouse or keyboard. They detect touch input from fingers or a stylus.

### 🔍 Types of Touchscreens

There are two main types of touchscreens:

1. **Resistive Touchscreens**: These consist of multiple layers. When you press the screen, the layers make contact, registering the touch. They can be used with a finger, stylus, or glove but may be less responsive.

2. **Capacitive Touchscreens**: Common in smartphones and tablets, these screens detect the electrical charge from your finger. They are more sensitive and support multi-touch gestures but may not work with gloves or non-conductive objects.

### ⚙️ How They Work

- **Resistive Screens**: Pressure causes two layers to touch, changing the electrical current, which the device interprets as a touch.

- **Capacitive Screens**: Touching the screen alters its electrostatic field. The device senses this change to determine the touch location.

### ✅ Advantages and ❌ Disadvantages

| Feature | Resistive Touchscreen | Capacitive Touchscreen |
|---|---|---|
| Input Method | Finger, stylus, glove | Bare finger or special stylus |
| Responsiveness | Less responsive | Highly responsive |

| | | |
|---|---|---|
| Multi-touch Support | Limited | Supports multi-touch gestures |
| Durability | More prone to wear and tear | More durable |
| Cost | Generally cheaper | Typically more expensive |

**Summary**

Touchscreens have revolutionized how we interact with devices, offering intuitive and direct control. Understanding the differences between resistive and capacitive screens helps in choosing the right technology for specific applications.

**Paired Discussion**

*"What are the advantages and disadvantages of touchscreens compared to older input methods (like keyboard and mouse)?"*

💬 **Suggestions to guide the discussion:**

- Think about speed, accuracy, comfort, cost, and accessibility.
- Which is better for typing? Which is easier for new users?
- How do these methods work in different environments (e.g., rainy, sunny, or dusty places)?

**Task 5. Reading.** Read the information about Key internal components of smartphones. Then complete the “match the component to its function” activity.

## Inside Your Smartphone: A Look at the Core Components

Ever wondered what makes your smartphone so smart? Let's explore the key internal components that work together to power your mobile device.

At the heart of every smartphone is the System on a Chip (SoC), which combines the CPU (Central Processing Unit) and GPU (Graphics Processing Unit). Think of this as your phone's brain, processing everything from text messages to complex gaming graphics.

The RAM (Random Access Memory) works alongside the SoC, temporarily storing active apps and data for quick access. More RAM means smoother multitasking between applications.

Your photos, apps, and music are stored in the Flash Memory, which acts as permanent storage even when your phone is powered off. This is why phones come with different storage capacities like 64GB or 128GB.

The Battery is typically a lithium-ion powerhouse that keeps everything running. It's carefully designed to balance size with power capacity, usually lasting about a day of normal use.

Several Antennas are strategically placed inside your phone for different purposes: cellular connectivity, Wi-Fi, Bluetooth, and GPS. These invisible components keep you connected to the world.

Finally, your phone's Display isn't just a screen – it's a complex component with multiple layers, including touch sensors that can detect multiple finger touches simultaneously.

All these components are connected through a Motherboard, which houses intricate circuits and pathways that allow these parts to communicate with each other seamlessly.

**Column A – Components**

1. System on a Chip (SoC)
2. RAM (Random Access Memory)
3. Flash Memory
4. Battery
5. Antennas
6. Display
7. Motherboard

**Column B – Functions**

_____ Stores your apps, photos, and music permanently, even when the phone is turned off.

_____ Acts as the brain of the phone, combining the CPU and GPU to handle all processing.

_____ Temporary storage for open apps and data to allow fast access and multitasking.

_____ Provides power to the smartphone, allowing it to function throughout the day.

_____ Hosts circuits and pathways that connect and coordinate all internal components.

_____ Receives and transmits signals for mobile data, Wi-Fi, Bluetooth, and GPS.

_____ Visual interface of the phone, often touch-sensitive and layered with sensors.