**Learner Full Name:** _____ **School:** _____

**Assigned Workstation:** _____ **Class:** _____

# Session 7: Peripherals & Connections

A **peripheral** is any device you connect to a computer to give it extra powers: a printer, a headset, a webcam, a projector. Today you will learn what each device does, which hole (**port**) it plugs into, how to connect without wires, and how to print without wasting paper.

## 1. Plain Talk: The Trotro Station

At a big trotro station like Kaneshie or Kejetia, every trotro has its own **lane**. The Madina bus waits in the Madina lane, the Kasoa bus in the Kasoa lane. Drive into the wrong lane and nobody gets anywhere. A computer is the same: every device needs the **right port**, and every port has its own shape so the wrong plug will not fit.

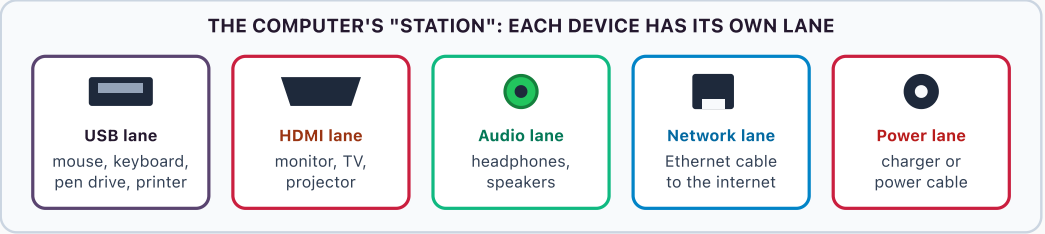


*Figure 7.0: Like lanes at a trotro station, each kind of device has its own port. The shapes stop you using the wrong one.*

## 2. Sort the Devices: Input, Output, Storage or Both?

Remember Session 1: **input** sends information *into* the computer and **output** brings it *out* to you. In Session 6 you met **storage**, which keeps files. Some devices do **both** input and output. Write each device in the right box.

**Word bank:** scanner • webcam • microphone • printer • speakers • projector • headset with microphone • external hard drive • memory card reader • keyboard • mouse • touchscreen • game controller • graphics tablet

**⬅️ INPUT**

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**➡️ OUTPUT**

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**💾 STORAGE**

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**↔️ BOTH INPUT & OUTPUT**

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## 1. Meet the Ports

Look at the back of a desktop or the sides of a laptop. These are the ports you will find most often:

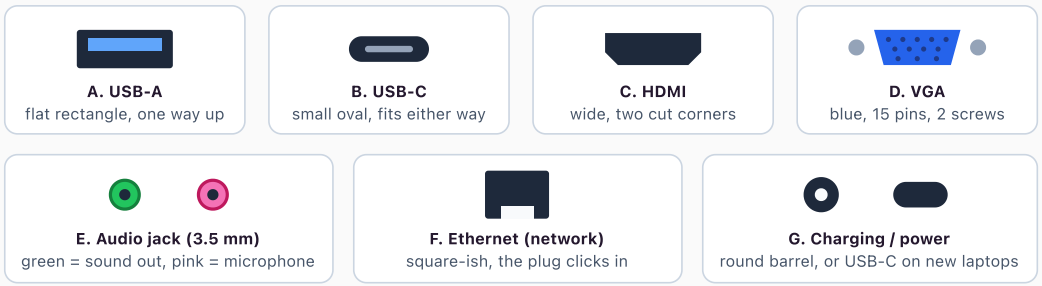


*Figure 7.1: The seven ports you will meet most often. Learn the shapes: the plug only fits its own port.*

## 2. What Plugs In Where?

| Port | What plugs in |
|---|---|
| **USB-A** | Mouse, keyboard, pen drive, printer cable, webcam, wired headset. The most common port of all. |
| **USB-C** | Newer phones and laptops: charging, fast drives, even a monitor on some laptops. |
| **HDMI** | Monitor, TV or projector. Carries picture *and* sound. |
| **VGA** | Older monitors and projectors (picture only). Still common in schools. |
| **Audio jack** | Headphones, speakers (green), microphone (pink). Laptops often have one jack for both. |
| **Ethernet** | A network cable to the router: steadier internet than Wi-Fi. |
| **Charging / power** | The laptop charger or the desktop's power cable. |

**NEVER FORCE A PLUG**

If a plug does not slide in gently, it is the wrong port or upside down. Look, turn it over and try again (remember the USB tongue from Session 5). Forcing it bends the pins and can break the port for good. Only plug in the power cable with dry hands, and ask an adult to handle wall sockets.

## 1. Two Ways to Connect

### 🔌 WIRED

- Plug a cable into a port. Usually works straight away.
- Steady, no batteries needed, hard to lose.
- But you are tied to the computer by the cable.

### 📶 WIRELESS

- **Bluetooth:** connects one device to another over a short distance (about 10 metres): headsets, speakers, mice, phones.
- **Wi-Fi:** connects devices to a network, for example a printer the whole room can use.
- No cables, but needs charged batteries and setting up once.

## 2. Pairing a Bluetooth Headset (Windows 11)

Connecting two Bluetooth devices for the first time is called **pairing**. After that, they find each other by themselves.

1. **Put the headset in pairing mode.** Usually you hold its power or Bluetooth button until a light flashes (check its instructions).
2. On the PC: **Start → Settings → Bluetooth & devices**. Make sure **Bluetooth** is **On**.
3. Click **Add device → Bluetooth**. Wait for the headset's name to appear and click it.
4. When it says **"Your device is ready to go"**, click **Done**. Play a sound to test it. To disconnect, switch the headset off or click it in Bluetooth & devices.

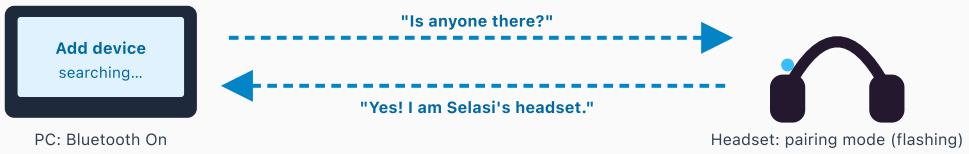


*Figure 7.2: Pairing. The PC searches, the headset in pairing mode answers, and the two remember each other.*

## 3. Wi-Fi Printers and Batteries

A **Wi-Fi printer** joins the same network as the computers, so everyone in the room can print to it without a cable. It appears in the print list like any other printer.

> 🔋 **WIRELESS TROUBLE? CHECK THE BATTERY FIRST**
> A wireless mouse that stops moving or a headset that crackles usually has a flat battery. Charge it or swap the batteries before anything else. Switch wireless devices off when you finish, to save the battery.

**Your turn:** Fatima's Bluetooth speaker does not appear in the "Add device" list. Give two things she should check.

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## 1. The Print Dialog

In almost every programme, press `Ctrl` + `P` to print. A **print dialog** opens. It may look slightly different in Word, Chrome or Edge, but the choices are the same:

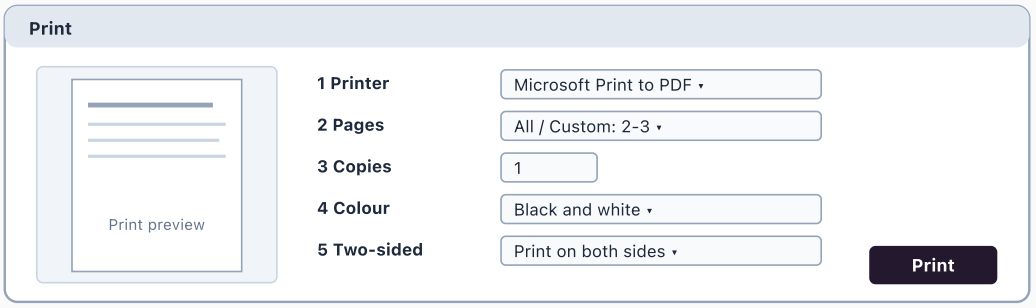


*Figure 7.3: A typical print dialog. Check the preview and all five choices before you press Print.*

### PRINT TO A FILE (PDF)

No printer? Choose **Microsoft Print to PDF** (in Word and most Windows apps) or **Save as PDF** (in Chrome and Edge). Click Print or Save, pick a folder and type a BIH file name. You get a PDF that looks exactly like the printed page.

### SAVE PAPER AND INK

- Always check the **preview** first.
- Print only the **pages** you need.
- Choose **black and white** unless colour matters.
- Use **two-sided** printing for long documents.
- Press Print **once**. Pressing again prints it twice!

## 2. Scanning: Paper Into the Computer

A **scanner** turns a paper page into a picture or PDF file. Lift the lid, lay the page face down, close it, then use the scanner's app (or the Windows **Scan** app) to choose PDF or JPG and click **Scan**. No scanner? Many phones can scan documents with the camera app or with the **Scan** button in the Google Drive app. Lay the page flat in good light, keep the phone straight above it, and crop to the edges.

**Your turn:** Kwabena wants to print only page 3 of a 10-page document, in black and white. What should he set in the dialog?

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## 1. Warm-Up: Plug It In

Open the **Plug It In** 3D lab on your session page. Connect each device to the right port, pair the Bluetooth headset and set up the projector. Real devices your Hub does not have? You can still practise every one here.

## 2. Lab Mission: Three Stations

Your mentor will move you round the stations. Tick each step when it works.

**A** **Sound station:** plug a headset or speakers into the audio jack (or a USB port, or pair by Bluetooth). Click the **speaker icon** on the taskbar, then the arrow **>** next to the volume slider and choose your device. (Or **Settings → System → Sound → Output**.) Play a short sound and set a comfortable volume.

**B** **Projector station:** connect the projector's HDMI or VGA cable to the PC and switch the projector on. Press `Windows` + `P` and try each mode: **PC screen only** (projector blank), **Duplicate** (same on both), **Extend** (one big desktop across both), **Second screen only** (only the projector). End on **Duplicate**.

**C** **Print station:** open the file your mentor gives you, press `Ctrl` + `P` and choose: **page 1 only**, **1 copy**, **black and white**. Print it on the real printer if your mentor says so, or choose **Microsoft Print to PDF** and save it in your BIH_Practice folder as Print_Test_YourName.

| Station | Done? | What I used / what I noticed |
|---|---|---|
| A. Sound: device and port | ☐ | ---------- |
| B. Projector: cable used | ☐ | ---------- |
| B. Mode best for showing the class | ☐ | ---------- |
| C. Printed or saved as PDF? | ☐ | ---------- |
| Plug It In lab finished | ☐ | ---------- |

💡 **EXTEND IS A PRESENTER'S SECRET**

In Extend mode, the projector becomes a second desktop. You can drag a window across to it and keep your notes on your own screen where the class cannot see them.

# SESSION 7 REVIEW & VERIFICATION

## 1. Which Device Would You Use?

| Job | Device (choose one) |
|---|---|
| 1. Put a signed paper form into the computer. | ◯ Printer<br>◯ Scanner<br>◯ Speakers |
| 2. Show your slides to the whole class on the wall. | ◯ Projector<br>◯ Webcam<br>◯ Card reader |
| 3. Talk and listen in an online lesson without disturbing others. | ◯ Speakers<br>◯ Headset with microphone<br>◯ Graphics tablet |

## 2. Match the Port

Write the letter of the port from Figure 7.1 (A to G).

| Device | Port letter |
|---|---|
| An old blue-plug projector at school | ---------- |
| A wired mouse | ---------- |
| A flat-screen TV, picture and sound together | ---------- |
| A network cable from the router | ---------- |

## 3. Written Review Questions

**Question 1:** What is the difference between Duplicate and Extend when you press Windows + P?

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**Question 2:** Give three ways to save paper and ink when printing.

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## 4. Self-Assessment & Mentor Sign-Off

| Peripherals Competency | With Help | Almost Alone | All By Myself! |
|---|---|---|---|
| 1. I can sort devices into input, output, storage or both. | ◯ | ◯ | ◯ |
| 2. I can name the main ports and what plugs into each. | ◯ | ◯ | ◯ |
| 3. I can connect sound and switch to a projector. | ◯ | ◯ | ◯ |
| 4. I can print or save as PDF with the settings I choose. | ◯ | ◯ | ◯ |

**Mentor Signature:** _____ **Date Completed:** _____