



UNIT LESSON

AP[®] NETWORKING

Unit 1: Managing My Connections

Lesson 1.1.A

A Repeatable Troubleshooting Process

Topic 1.1 — Fixing What's Slowing Me Down

How network analysts move from "it's broken" to a verified, documented fix — without guessing.

Skill 3.A Identify

Skill 3.B Determine

≈ 75 min

12 MCQ · 2 FRQ

INSIDE THIS LESSON

1. Why "just fix it" doesn't work
2. The seven-step troubleshooting method
3. Using AI tools honestly (EK 1.1.A.7)
4. Worked examples
5. Practice: multiple choice & free response

LEARNING OBJECTIVE 1.1.A

Explain how to troubleshoot common device and network issues.

- 1.1.A.1** Device and network issues often have non-obvious, layered causes.
- 1.1.A.2** Gather information first; try simple fixes before complex ones.
- 1.1.A.3** Diagnostic tools narrow the list of probable causes.
- 1.1.A.4** Test simple, nondisruptive solutions first; rank options by time, difficulty, and cost.
- 1.1.A.5** Implement the solution, then verify that the problem is resolved.
- 1.1.A.6** If the issue is not resolved, continue troubleshooting and document every step.
- 1.1.A.7** AI tools can assist, but their suggestions must be verified alongside traditional methods.

BY THE END YOU CAN

- Name and order the seven steps of the troubleshooting method
- Separate a *symptom* from a *root cause*
- Rank candidate fixes by time, difficulty, cost, and disruption
- Judge whether an AI troubleshooting suggestion is safe to try
- Write a useful troubleshooting log entry

KEY VOCABULARY

Symptom	What the user observes ("video freezes")
Root cause	The underlying condition that produces the symptom
Theory of probable cause	A testable guess about the root cause
Nondisruptive	A fix that does not interrupt work or risk data
Escalation	Handing a problem to someone with more access or expertise
Verification	Proof that the fix worked and nothing else broke

1 Why "just fix it" doesn't work

When a device misbehaves, the problem a user reports is almost never the problem itself. "The Wi-Fi is slow" is a **symptom**. The **root cause** might be a weak signal, a sibling streaming 4K video, a laptop whose CPU is pinned at 100%, or an outage at the internet service provider (ISP). Each root cause needs a *different* fix, so a technician who skips straight to a fix is really just guessing.

- **Causes are layered (EK 1.1.A.1).** A single symptom can come from the application, the operating system, the hardware, the local network, or a service far away on the internet.
- **Causes can stack.** A laptop with low storage *and* a weak signal shows both problems as one symptom: "everything is slow."
- **The obvious cause may be wrong.** The last thing a user changed is a good lead, not proof.

**SYMPTOM: "My video call keeps freezing."**

The only thing the user can see. It does not tell you where the problem lives.

**Application layer**

Video app outdated · too many browser tabs · camera driver error

**Device / operating system**

CPU or RAM sustained at 80–90%+ · storage almost full · overheating and throttling

**Wireless link**

Weak signal (far from access point, walls, microwave interference) · dropped connection

**Local network**

Bandwidth shared with other devices · large downloads · router needs restart

**Internet / service**

ISP outage · video platform outage · school network filtering

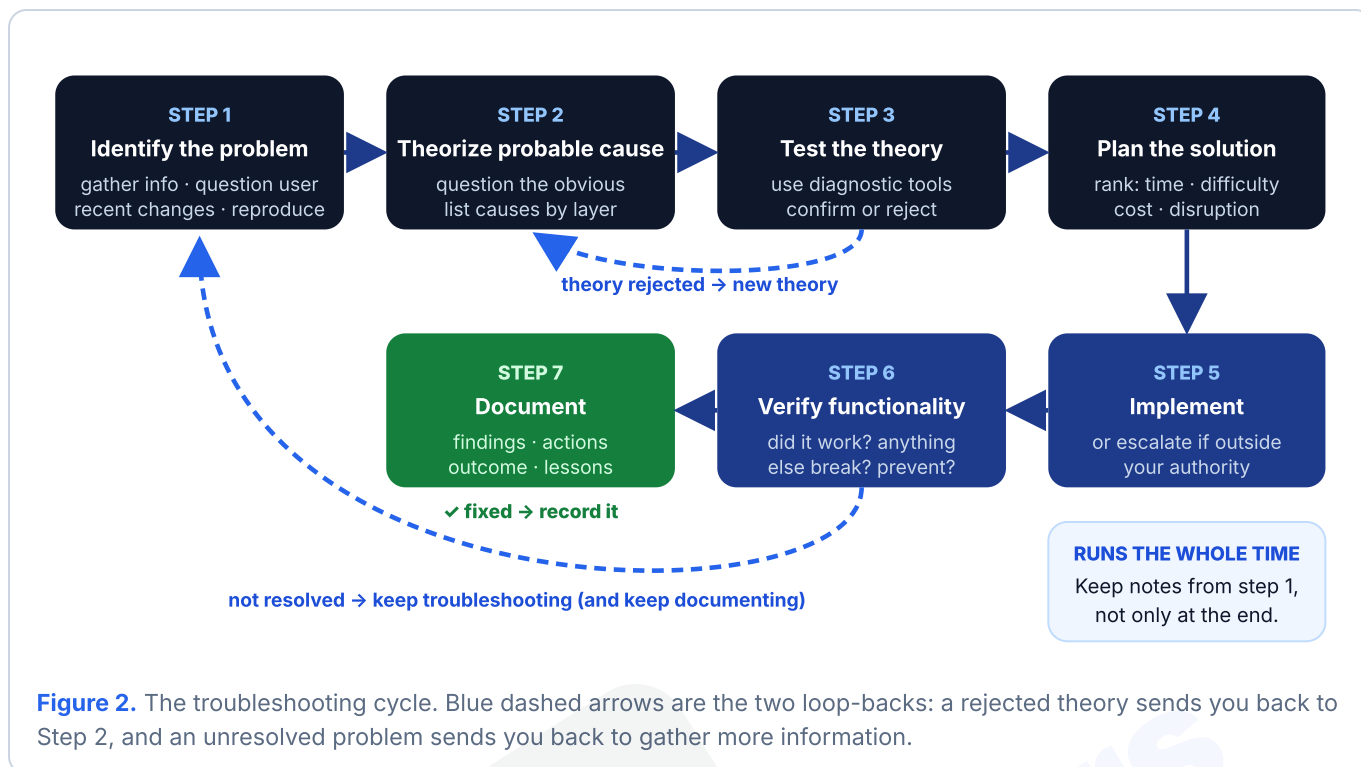
Figure 1. One symptom, five layers of possible root causes. Good troubleshooting works through these layers on purpose instead of jumping to the first idea.

DEFINITION

Troubleshooting is a systematic process for finding the root cause of degraded performance or lost functionality, testing a solution, and confirming that normal operation is restored.

2 The seven-step troubleshooting method

Professional technicians, from help-desk staff to network engineers, use the same basic cycle. The exact wording varies by organization, but the logic is always the same: **learn → guess → test → plan → act → verify → record**. If a test or fix fails, you loop back instead of starting over at random.



Step 1 · Identify the problem (gather information first)

EK 1.1.A.2 says *gather information before acting*. Changing things before you understand the problem destroys evidence and can create a second problem.

- **Question the user.** What exactly happens? When did it start? Does it happen every time? What changed recently (new app, update, moved the desk, new router)?
- **Identify the scope.** One app or every app? One device or every device on the network? One room or the whole house? *Scope is the single most useful clue.*
- **Observe it yourself.** Try to reproduce the problem. A problem you can make happen on demand is much easier to fix.
- **Check for error messages.** Note the exact wording or take a screenshot.

Good question to ask	What the answer tells you
"Do other devices on this Wi-Fi have the same problem?"	Yes → the network or ISP is likely. No → focus on this device.
"Does it happen in every app or just one?"	One app → application layer. Every app → OS, hardware, or network.
"Did it work yesterday? What changed since then?"	Points to an update, new software, or a physical move.
"Is it worse in some rooms?"	Location-dependent → wireless signal strength.
"Is the device hot or is the fan loud?"	Possible overheating or a sustained high CPU load.

- **Collect the records the device already keeps.** System logs (Event Viewer on Windows, the Console app on macOS) are time-stamped. They can show the first error and when it started, even

when the user can't remember.

- **Clarify the impact.** Is the user blocked completely, or just slowed down? Is data at risk? How many people are affected?

WRITE A ONE-SENTENCE PROBLEM STATEMENT

Finish Step 1 by summarizing **symptom + scope + impact** in one sentence, for example: *"Since Monday, LT-07's video calls freeze every two minutes (one device; other users are fine); Maya can't attend online classes."* A clear statement keeps every later step aimed at the same target, and it's the first line of the log.

TRIAGE: WHICH PROBLEM FIRST?

Help desks rarely have only one problem in the queue. **Triage** means ranking problems by urgency and impact. "The whole school can't reach the internet" outranks "one printer prints slowly." Scope and impact from Step 1 are exactly what triage needs.

Step 2 · Establish a theory of probable cause

- Use what you gathered to list **likely** causes, most likely first.
- **Question the obvious.** Is the device powered on, is Wi-Fi enabled, is airplane mode off, is the cable seated? Simple causes are common causes.
- **Start with the most recent change.** Most new problems follow something that changed: an update, a newly installed app, a new device, a desk move. Next, check the spots where failures have happened before.
- **Check what's already known.** Many problems have been solved before. Search the help desk's knowledge base, past tickets, or the vendor's support articles for the same symptom.
- Think in layers (Figure 1). If every device is slow, a cause inside one laptop can't explain it.

WATCH OUT: STARTING WITH WHAT YOU KNOW BEST

It's tempting to check the part of the system *you* are most comfortable with first. That rules it out quickly, but it's like looking for lost keys under the streetlight because that's where the light is. If quick checks of recent changes and common failures don't find it, switch to a **systematic** search, such as half-splitting below.

Step 3 · Test the theory (diagnostic tools narrow the causes)

EK 1.1.A.3: diagnostic tools turn a guess into evidence. Each test should **confirm** or **reject** a theory. If a theory is rejected, form a new one (loop back to Step 2).

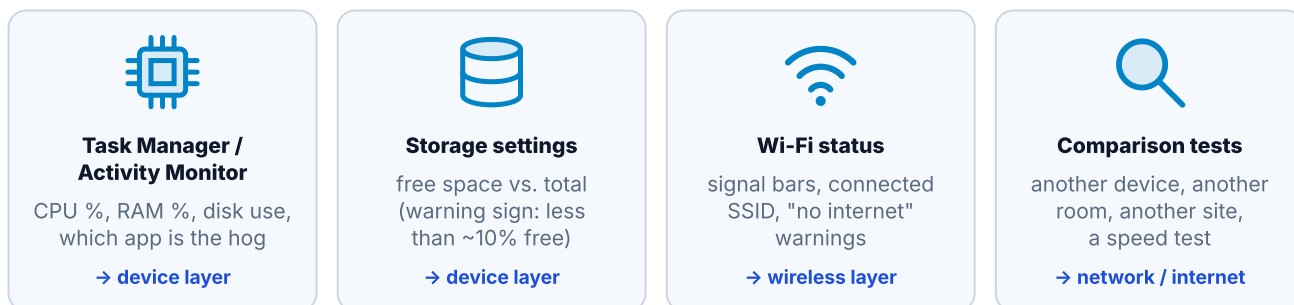


Figure 3. Common Unit 1 diagnostic tools and the layer each one tells you about. Lesson 1.1.B covers the exact thresholds. You'll add command-line tools such as `ping` and `ipconfig` in Unit 2.

EXAM TIP: THE HALF-SPLIT METHOD

When a problem could be anywhere along a path (device → Wi-Fi → router → internet), test in the middle first. If another device on the same Wi-Fi works fine, focus first on that device. Broader network problems become less likely, but this test does not rule them out.

The method repeats two moves until the fault is pinned down:

- **Measure:** compare what you observe with what *normal* looks like at that point. ("Should the router's internet light be solid? It's blinking amber.")
- **Split:** based on the result, move toward the source (the device) or toward the destination (the internet), and test halfway again.

Step 4 · Establish a plan of action (rank the solutions)

EK 1.1.A.4: try **simple, nondisruptive** solutions first, and rank options by **time, difficulty, and cost**. On the exam, a good answer also weighs **disruption and risk**: will the fix interrupt work, delete data, or affect other people?

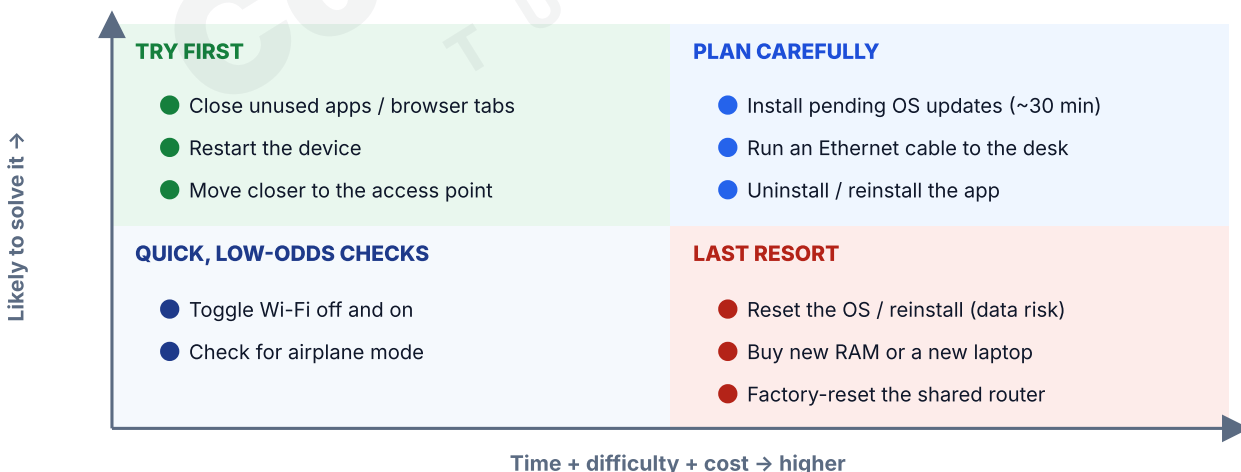


Figure 4. A prioritization grid for the "slow laptop" case. Start in the green quadrant. A fix in the red quadrant is justified only after cheaper tests have ruled out the simple causes, and only with a backup and approval.

A complete plan also answers three practical questions:

- **What could go wrong, and what's Plan B?** Before an update or reinstall, back up the user's files and know how to undo the change.
- **Who needs to know?** Tell the user (and anyone else affected) what will happen and how long it will take, especially if a device or network will be unavailable.
- **What do I need?** Admin rights, cables, a charger, a replacement part, or approval from whoever owns the device.

Step 5 · Implement the solution, or escalate

- Change **one thing at a time**. If you change three settings and the problem goes away, you don't know which one fixed it, and you may have caused a new problem.
- **Escalate** when the fix needs access, tools, or authority you don't have. For example, you're a student and the fix requires changing the school's router.
- Get permission before disruptive steps: restarting a shared router interrupts everyone on the network.

Support level	Who	Typical work, and when it escalates
Tier 0	The user, with self-help	FAQs, how-to articles, password-reset portals. Escalates when self-help doesn't solve it.
Tier 1	Help-desk technician	Common, well-documented problems: restarts, reconnecting Wi-Fi, ending a stuck app. Escalates with a clear write-up of what was already tried.
Tier 2	More experienced technician	Deeper diagnosis, configuration changes, hardware swaps. Escalates problems that need a specialist.
Tier 3	Specialists or engineers	The hardest or newest problems. They find the root cause, design a lasting fix, and write it up so Tiers 1–2 can handle it next time.

Many organizations add a level above Tier 3 for outside vendors or manufacturers. Exact tier names vary; the idea that matters is escalation **with documentation**.

TEMPORARY FIX VS. PERMANENT FIX

- **Temporary fix (workaround):** gets the user working *now*, without removing the root cause. Example: plug into Ethernet because the Wi-Fi adapter keeps dropping.
- **Permanent fix:** removes the root cause, so the problem shouldn't come back. Example: replace or update the failing Wi-Fi adapter.

Workarounds are fine and often smart, but the ticket should say a workaround is in place and the root cause is still open.

Step 6 · Verify full system functionality (EK 1.1.A.5)

- Re-run the exact task that failed, such as rejoining the video call.

- Check that the fix didn't break something else. After uninstalling an app, does the printer still work?
- Use the same tool that showed the problem: CPU usage should now be *below* the warning range.
- **Ask the user.** They're the final judge of whether the device works the way they need it to.
- Add **preventive measures** where they make sense, such as enabling automatic updates.

Step 7 · Document findings, actions, and outcomes (EK 1.1.A.6)

Documentation is not a formality. It saves the *next* person, often future you, from starting from zero. If the problem is **not resolved**, the log shows exactly what has already been ruled out.

- **Close the loop with the user:** explain in plain language what was wrong and what you did, and tell them what to do if it comes back.
- **Review bigger failures afterward.** For a major outage, teams hold a short post-incident review: What was the root cause, and how sure are we? How long did the problem exist before anyone noticed? How do we prevent it? The goal is fixing the *system*, not blaming a person.



TROUBLESHOOTING LOG · Ticket #1042 · Laptop LT-07 (Maya R.)

Date/time	Oct 14, 3:40 PM
Symptom	Video calls freeze every ~2 min; other users on the same Wi-Fi are fine.
Info gathered	Started after weekend; happens in all apps; laptop fan loud; 4 bars of signal.
Theory tested	High CPU (device layer). Task Manager: CPU 97% sustained — "SyncHelper" 71%.
Action taken	Ended SyncHelper; disabled it at startup (one change only).
Verification	CPU 18–25% over 15 min; 20-min test call with no freezes.
Status / next	RESOLVED. Ask user to report if SyncHelper is needed for class files.

Figure 5. A complete log entry. Each row maps to a step of the method. A good FRQ answer about documentation names *specific* fields like these.

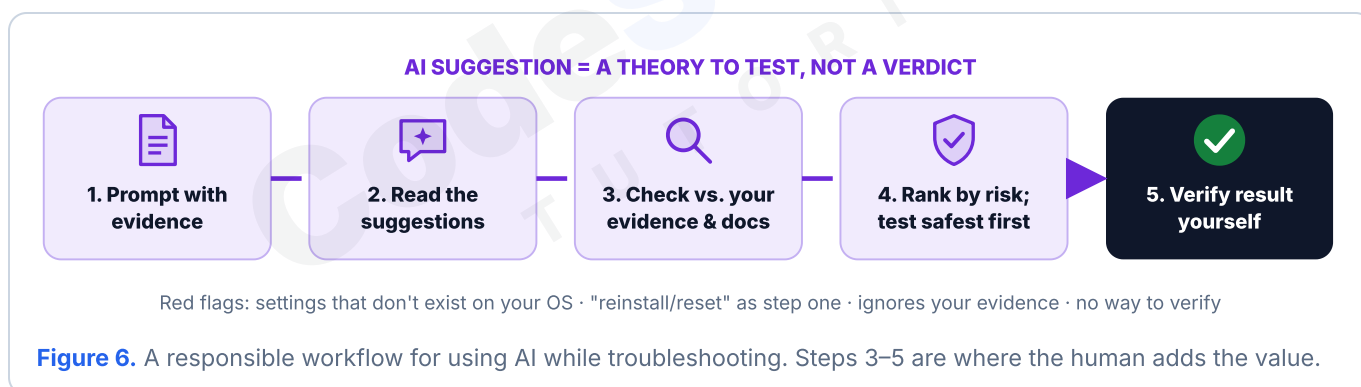
Same method, different names

Some help desks write the method as **eight** steps instead of seven. Nothing new is added; the "loop back" just becomes its own step. Recognize both versions on the exam.

Seven-step version (this lesson)	Eight-step help-desk version
1. Identify the problem	1. Define the problem (symptom, scope, impact) 2. Gather detailed information (logs, user interviews, settings, recent changes)
2. Theorize · 3. Test the theory	3. Identify a probable cause
4. Plan the solution	4. Devise a plan to resolve it (including risks and a backup plan)
5. Implement	5. Make the changes in the plan
6. Verify functionality	6. Observe the results
Loop back if not resolved	7. If not resolved, repeat the process
7. Document	8. Document the changes and the outcome

3 Using AI tools honestly (EK 1.1.A.7)

AI chatbots can be good troubleshooting partners. They can suggest causes you forgot, explain an error message, or draft a checklist. But an AI tool **cannot see your device**, may make up settings that don't exist on your system, and often suggests drastic fixes first. Treat every AI suggestion as a *theory*, not an answer.



WHAT MAKES A GOOD TROUBLESHOOTING PROMPT

- **Device and OS:** "Windows 11 laptop, 8 GB RAM"
- **Exact symptom and scope:** "video freezes every 2 minutes; other devices on the same Wi-Fi are fine"
- **Evidence so far:** "Task Manager shows CPU at 97%; Wi-Fi shows 4 bars"
- **Constraints:** "school laptop, no admin rights, can't lose files"
- **The ask:** "rank possible causes and give the least disruptive test for each"

4 Worked examples

WORKED EXAMPLE 1 Applying the full method

Jordan's laptop has been "super slow" for two days. Web pages take 20+ seconds to load. Jordan's phone, on the same home Wi-Fi, loads pages instantly.

- 1 **Identify:** scope is *one device*, because the phone works on the same network. Ask: what changed two days ago? Jordan installed a free video converter.
- 2 **Theories (most likely first):**
 - The new program is consuming CPU or RAM (device layer).
 - Malware bundled with the free download (device or security).
 - The laptop's own Wi-Fi signal is weak (wireless layer). Less likely, since the phone is in the same room.
- 3 **Test:** open Task Manager. CPU 94% sustained; "VidConvertPro" is using 80%. Theory 1 is **confirmed**.
- 4 **Plan, ranked:** (a) end the process now: seconds, free, no risk; (b) stop it from launching at startup: 1 minute; (c) uninstall it and run an antivirus scan: 15 minutes; (d) reset the OS: hours, risks data, *not justified*.
- 5 **Implement** (a), then (b), and then (c) because of the malware risk. Make each change separately and note each one.
- 6 **Verify:** CPU idles at about 15%, pages load in about 2 seconds, and the antivirus scan is clean.
- 7 **Document:** symptom, cause (the converter at 80% CPU), actions, verification results, and a prevention note: download software only from trusted sources.

Variation: If the phone had been slow too, the scope would be *every device*. A cause inside one laptop can't explain that, so you'd move to the network or ISP layers instead: run a speed test, check for large downloads, restart the router with permission, or check the ISP's outage page.

WORKED EXAMPLE 2 Ranking solutions by time, difficulty, cost, and disruption

A student's desktop in the basement keeps dropping Wi-Fi during online tests. The signal shows 1 bar. The router is two floors up. Rank the four candidate fixes.

Fix	Time	Difficulty	Cost	Disruption	Rank
Move the router to a central spot (shared device)	15 min	Low	\$0	Medium: everyone loses internet briefly	2
Run an Ethernet cable from router to desktop	1–2 hr	Medium	~\$20	Low	3
Move the desktop to a room nearer the router for test days	10 min	Low	\$0	Low	1
Buy a new router	Days	Medium	\$100+	Medium	4

- ✓ **Reasoning:** the weak signal is explained by distance and floors, so test the cheapest distance fix first. If the problem stays even near the router, the theory is wrong. Loop back, because it might be the desktop's wireless adapter. Notice that buying hardware ranks last: it's the most expensive option and it doesn't test the theory any better.

WORKED EXAMPLE 3 Evaluating an AI suggestion

CHAT TRANSCRIPT

STUDENT

My Chromebook says "Connected, no internet." My friend's laptop works on the same Wi-Fi. What should I do?

AI ASSISTANT

1) Powerwash (factory reset) your Chromebook. 2) Open Terminal and run `netsh winsock reset`. 3) Replace your router, which may be failing. 4) Forget the network and reconnect.

- 1 Check each suggestion against the evidence:** the friend's laptop works, so the router and ISP are fine. Suggestion 3 *contradicts the evidence*. Reject it.
- 2 Check that it applies to this device:** `netsh winsock reset` is a *Windows* command, and ChromeOS has no such command. Suggestion 2 is *invalid for this OS*. Reject it.
- 3 Rank what's left by disruption:** Suggestion 4 is quick, free, and nondisruptive. Suggestion 1 erases local data. It's the last resort, not the first step.
- 4 Act and verify:** forget the network, reconnect with the password, then load a website to verify. Record that the AI's ordering was unsafe.

COMMON MISTAKES

- **Jumping to a fix before gathering information**, such as restarting the router before asking whether other devices work.
- **Changing several things at once**, which leaves you unable to tell which change worked.
- **Skipping verification**. "It should be fixed now" is not verification.
- **Choosing the most powerful fix instead of the least disruptive one** (a factory reset when closing an app would do).
- **Treating an AI answer as correct** without checking that it fits the OS and the evidence.

IN THE REAL WORLD

IT help desks track every problem as a **ticket**. Many organizations measure a *first-contact resolution rate*, the share of problems solved without escalating. Technicians who follow a consistent method and document well raise that number, because the next technician never repeats tests that were already done.

Lesson summary

- Symptoms are not causes. Causes are often **layered**: app, device, wireless, local network, internet.
- Seven steps: **identify → theorize → test → plan → implement → verify → document**, with loop-backs when a theory or fix fails.
- **Scope** (one app, one device, every device) is the fastest way to narrow the cause.
- Rank fixes by **time, difficulty, cost, and disruption**. Simple and nondisruptive fixes come first.
- Change one thing at a time, **verify** with evidence, and **document** everything, especially when the problem isn't solved yet.
- Start with the **most recent change**, then search systematically (**half-split**). Escalate through support **tiers** with notes, and label a **workaround** as temporary until the root cause is fixed.
- AI suggestions are **theories to test**: check them against your evidence, your OS, and your risk tolerance.

CHECK YOURSELF

1. A user says "the internet is down." Name two questions that would tell you the *scope* of the problem.
2. Why is changing one variable at a time important during Step 5?
3. Give one reason an AI-suggested fix might be valid in general but wrong for this situation.

Practice · Lesson 1.1.A

Part A: 12 multiple-choice questions (about 18 min). Part B: 2 free-response questions (about 30 min).
Answers and scoring guidelines are in the separate Answer Key.

Part A · Multiple Choice

- 1 A user reports that "the Wi-Fi is broken." Which action should a technician take **first**? EK 1.1.A.2
 - (A) Restart the home router so that all devices reconnect
 - (B) Ask whether other devices on the same network are affected and when the problem started
 - (C) Reinstall the wireless adapter driver on the user's laptop
 - (D) Replace the Ethernet cable between the modem and the router
- 2 Which statement best describes the difference between a symptom and a root cause? EK 1.1.A.1
 - (A) A symptom is what the user observes; a root cause is the underlying condition that produces it.
 - (B) A symptom is always a hardware problem; a root cause is always a software problem.
 - (C) A symptom can be fixed directly; a root cause cannot be fixed.
 - (D) A symptom affects one device; a root cause affects the entire network.
- 3 Five laptops and two phones in a home all load websites slowly at the same time. Which root cause is **least** likely? EK 1.1.A.1
 - (A) A game console is downloading a 90 GB update.
 - (B) The internet service provider is experiencing an outage.
 - (C) The router has been running for months and needs a restart.
 - (D) One laptop has its CPU running at 98% utilization.
- 4 A technician believes a laptop is slow because its RAM is nearly full. Which step **best** tests this theory? EK 1.1.A.3
 - (A) Opening the system resource monitor to view current memory usage and the processes using it
 - (B) Ordering additional RAM for the laptop
 - (C) Asking the user how much RAM they think the laptop has
 - (D) Running a speed test on a different device
- 5 Which candidate fix should be attempted **first** for a laptop that has become sluggish after a long day of use, given no other information? EK 1.1.A.4
 - (A) Performing a factory reset
 - (B) Replacing the internal storage drive
 - (C) Closing unused applications and restarting the laptop
 - (D) Upgrading the operating system to a new major version

- 6 A technician changes the Wi-Fi channel, updates the network driver, and moves the laptop closer to the access point all at once. The problem disappears. What is the **main** weakness of this approach? EK 1.1.A.5
- (A) The technician did not escalate the problem.
 - (B) Moving closer to an access point never improves performance.
 - (C) Drivers should only be updated by the manufacturer.
 - (D) The technician cannot determine which change actually fixed the problem.
- 7 After ending a process that was using 95% of the CPU, which action **best** verifies that the issue is resolved? EK 1.1.A.5
- (A) Assuming the problem is fixed because the process is gone
 - (B) Immediately closing the ticket and emailing the user
 - (C) Monitoring CPU usage for several minutes and repeating the task that was originally slow
 - (D) Restarting the router to clear any remaining issues
- 8 A technician has tried three solutions and the problem is still not resolved. According to sound troubleshooting practice, what should the technician do next? EK 1.1.A.6
- (A) Record what was tried and the results, then form a new theory or escalate
 - (B) Repeat the three solutions in a different order
 - (C) Stop troubleshooting and tell the user the device must be replaced
 - (D) Factory-reset the device, since all simple options have failed
- 9 Which troubleshooting log entry is the **most** useful to another technician? EK 1.1.A.6
- (A) "Fixed laptop."
 - (B) "Laptop slow. Did some stuff. Seems better."
 - (C) "Laptop slow in all apps since Monday. CPU 96% (BackupSync). Disabled BackupSync at startup. CPU now 20%; user confirmed speed OK after 15 min."
 - (D) "User complained about speed again. Told them to buy a new laptop."
- 10 An AI chatbot tells a student to fix a Mac's slow Wi-Fi by running `ipconfig /flushdns` and editing the Windows registry. What is the **best** evaluation of this advice? EK 1.1.A.7
- (A) It should be followed exactly because AI tools are trained on technical documentation.
 - (B) It should be rejected or adapted because the commands target a different operating system than the student's device.
 - (C) It is correct because registry edits are the fastest way to fix Wi-Fi.
 - (D) It should be followed, but only after a factory reset.

- 11 Which prompt to an AI tool is **most** likely to produce useful troubleshooting suggestions? EK 1.1.A.7
- (A) "Fix my computer."
 - (B) "Why is the internet bad?"
 - (C) "Give me the most advanced fix you know for networking."
 - (D) "Windows 11 laptop; video calls freeze every few minutes; other devices on the same Wi-Fi are fine; CPU shows 90%+. List likely causes and the least disruptive test for each."
- 12 A student's laptop shows "Connected, no internet." The student's tablet, on the same Wi-Fi, also shows "no internet." Which step is the **most** logical next test? EK 1.1.A.3
- (A) Reinstall the laptop's operating system
 - (B) Check the router's status lights and whether other household devices or the ISP report an outage
 - (C) Delete large files from the laptop
 - (D) Close the laptop's browser tabs



Part B · Free Response

FRQ 1 · Troubleshooting Log Analysis

7 POINTS · SKILLS 3.A, 3.B

A school help-desk volunteer handled the ticket below.

TICKET #2217 · LIBRARY LAPTOP LIB-12

Time	Entry
9:02	User: "Laptop is really slow, videos stutter." Started this morning.
9:04	Factory-reset the laptop to clear any problems.
10:15	Reset complete. User's saved essay drafts are gone. Laptop still stutters on videos.
10:20	Noticed other library laptops also stutter on videos. A class of 30 students is streaming a documentary on the library Wi-Fi.
10:22	Closed ticket: "Laptop fixed."

(a) Identify **two** steps of the troubleshooting method that the volunteer skipped or performed incorrectly. For each, describe what should have happened.

(b) Using the information in the 10:20 entry, identify the most likely root cause of the stuttering and explain how the evidence supports your answer.

(c) Propose **two** possible solutions for the root cause you identified in part (b). Rank them, and justify the ranking using at least **two** of these factors: time, difficulty, cost, disruption.

(d) Rewrite the 10:22 entry so that it correctly documents the status of the ticket.

FRQ 2 · Evaluating AI-Assisted Troubleshooting

6 POINTS · SKILLS 3.A, 3.B, 4.C

Priya's Windows laptop takes 6 minutes to start and freezes when she opens more than two apps. Her phone works normally on the same Wi-Fi. She asks an AI assistant for help.

CHAT TRANSCRIPT

PRIYA
my laptop is slow help

AI ASSISTANT

Here are fixes, from most to least effective: (1) Buy a new laptop with at least 32 GB RAM. (2) Reset your router and change your Wi-Fi channel to 11. (3) Reinstall Windows. (4) Check Task Manager for programs using a lot of memory and disable unnecessary startup apps.

(a) Explain **one** way Priya's prompt could be improved, and describe how that change would make the AI's suggestions more useful.

(b) Identify **one** AI suggestion that is **not** supported by the evidence in the scenario and explain why.

(c) Reorder the four suggestions into the sequence Priya should actually follow. Justify the position of your **first** and **last** choices.

(d) Describe how Priya should verify that her chosen fix worked.





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