

# Classroom Tech Troubleshooting Guide for Teachers

*Quick fixes for common classroom technology problems + prevention strategies.*

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## Quick Start Guide

### How to use this guide

1. **Find your problem** in the contents below
2. **Try the quick fix** first (usually takes under 2 minutes)
3. **If that doesn't work**, move to the detailed solutions
4. **Prevention tips** help you avoid issues in future
5. **Keep this handy** - bookmark or print for easy access during lessons

### Before you start troubleshooting

- ☐ Have you tried turning it off and on again? (Seriously, this works 60% of the time)
- ☐ Are all cables properly connected?
- ☐ Is the device charged or plugged in?
- ☐ Have you checked if other devices have the same problem?

**Emergency backup plan:** Always have a non-tech alternative ready (printed worksheets, board work, discussion activity)

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**A. Internet & Wi-Fi Issues B. Interactive Whiteboard / Smart Board Problems C. Projector & Display Issues D. Audio & Sound Problems E. Student Device Issues (Tablets, Laptops, Chromebooks) F. Login & Password Problems G. Printing Issues H. Video Conferencing Problems I. Software & App Issues J. Prevention & Maintenance**

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## A. Internet & Wi-Fi Issues

### Problem: No internet connection / Pages won't load

**Quick Fix (30 seconds):** 1. Check the Wi-Fi icon on your device - is it connected? 2. Try accessing a different website (maybe it's just one site that's down) 3. Ask students if they're having the same problem (helps identify if it's your device or the network)

### Detailed Solutions:

**If only your device is affected:** - Turn Wi-Fi off and on again in settings - Forget the network and reconnect (Settings → Wi-Fi → Select network → Forget) - Restart your device - Check you're connected to the correct network (school network, not guest)

**If multiple devices are affected:** - Check if other classrooms have internet (could be school-wide) - Restart the classroom router if you have access (unplug for 30 seconds) - Contact IT support - likely a network issue beyond classroom level

**Common Causes:** - Too many devices connected to one access point - Router needs restarting - Scheduled maintenance or updates - External provider issues

**Prevention:** - Know your IT support contact details - Download essential resources the night before - Keep offline activities ready as backup - Test internet connection before lessons start

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### Problem: Internet is very slow

**Quick Fix (1 minute):** 1. Close unnecessary tabs and applications 2. Ask students to close apps they're not using 3. Pause any downloads or updates

**Detailed Solutions:** - Disconnect devices that aren't currently needed - Check if someone is streaming video - this uses massive bandwidth - Move closer to the Wi-Fi router if using a laptop - Use wired ethernet connection if available (much faster and more stable) - Download videos before lessons rather than streaming

**Prevention:** - Limit the number of devices connected simultaneously - Schedule downloads during off-peak times - Use lower-resolution videos when possible - Cache or download frequently used resources

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## B. Interactive Whiteboard / Smart Board Problems

### Problem: Touch isn't working / Board not responding

**Quick Fix (2 minutes):** 1. Check the USB cable connection at both ends (board and computer) 2. Look for a flashing light on the board (shows it's powered) 3. Restart the computer whilst the board stays connected

**Detailed Solutions: - Recalibrate the board:** - Open the smart board software (SMART Notebook, Promethean, etc.) - Find 'Orient' or 'Calibrate' in settings - Follow the on-screen instructions to touch target points - This usually fixes 90% of touch issues

- **Check connections:**
  - USB cable firmly connected
  - Power cable plugged in (if board has separate power)
  - Try a different USB port on the computer
- **Software issues:**
  - Update board software/drivers
  - Reinstall board software if persistent issues
  - Check the software is running (look for icon in taskbar)

**Prevention:** - Calibrate the board weekly - Don't let cables dangle where they can be pulled - Clean the board surface regularly (removes dust that affects touch) - Train students to touch gently, not press hard

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**Problem: Board image is fuzzy or distorted**

**Quick Fix:** - Adjust the projector focus ring - Check the projector lens isn't dirty

**Detailed Solutions:** - Clean the projector lens with a microfibre cloth - Adjust projector position if it's been moved - Check projector resolution settings match the board - Replace projector lamp if image is dim (contact IT)

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**Problem: Can't find the board software**

**Quick Fix:** - Check the system tray (bottom-right on Windows, top-right on Mac) - Search for "SMART" or "Promethean" in the start menu

**Detailed Solutions:** - Reinstall the software from school IT resources - Check if software needs updating - Verify you have the correct software for your board model

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## C. Projector & Display Issues

**Problem: Projector shows "No Signal"**

**Quick Fix (1 minute):** 1. Check the cable connecting computer to projector (HDMI or VGA) 2. Press the input/source button on projector remote 3. Try the display toggle key on your laptop (usually Fn + F4, F5, or F8)

**Detailed Solutions:**

**For laptops:** - **Windows:** Press Windows key + P, select 'Duplicate' or 'Extend' - **Mac:** System Preferences → Displays → Arrangement → Mirror displays - Try connecting cable before turning on the projector - Restart laptop with projector cable connected

**Check connections:** - HDMI/VGA cable firmly in both ends - Try a different cable (cables fail surprisingly often) - Check you're using the correct input port - Ensure adapters are properly connected (USB-C to HDMI, etc.)

**Projector settings:** - Cycle through input sources using remote (HDMI 1, HDMI 2, VGA, etc.) - Check projector isn't in standby mode - Ensure projector has warmed up (can take 30-60 seconds)

**Prevention:** - Label cables so you know which input to select - Keep spare cables in the classroom - Test before lessons start - Know the correct display toggle keys for your laptop

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### Problem: Projector image is upside down or reversed

**Quick Fix:** - Find the projector remote - Look for 'Menu' → 'Projection' → change to 'Front'

**Detailed Solutions:** - Access projector menu using remote or buttons on projector - Navigate to 'Projection Mode' or 'Installation' - Select: Front, Rear, Ceiling Front, or Ceiling Rear as appropriate - Save settings

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### Problem: Projector colours are wrong (purple, green tint, etc.)

**Quick Fix:** - Check VGA cable pins aren't bent or damaged - Try a different cable

**Detailed Solutions:** - Inspect cable connectors carefully - Replace VGA cable (HDMI cables less prone to this issue) - Reset projector to factory settings if problem persists - Check cable isn't being pinched or damaged anywhere

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## D. Audio & Sound Problems

### Problem: No sound from speakers

**Quick Fix (30 seconds):** 1. Check volume isn't muted (computer and speakers) 2. Turn volume up on both computer and speakers 3. Check the green audio cable is plugged into the correct port (usually green port on computer)

#### Detailed Solutions:

**Check connections:** - Audio cable firmly connected to computer headphone jack (usually green port) - Speakers plugged into power - Speakers turned on (check for power light)

**Computer settings:** - **Windows:** Right-click speaker icon → Open sound settings → Check output device - **Mac:** System Preferences → Sound → Output → Select correct device - Ensure nothing is plugged into headphone jack (this usually disables speakers)

**Test the audio:** - Try playing a different video or audio file - Test with YouTube video (known working audio) - Try headphones to determine if it's speaker or computer issue

**Common Causes:** - Wrong output device selected - Muted in software (like video player) rather than system - Speakers not powered on - Cable in wrong port (microphone instead of speaker port)

**Prevention:** - Label audio cables and ports - Keep a spare set of speakers - Test audio before lessons - Know how to quickly switch audio output devices

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### Problem: Sound is too quiet even at maximum volume

**Quick Fix:** - Check volume in the video player/app itself (separate from system volume) - Move speakers closer to students

**Detailed Solutions:** - Check Windows/Mac system volume AND application volume (both need to be up) - Try different speakers or connect to better sound system - Use audio enhancer software if available - Connect to classroom PA system if available - Check 'Sound' settings for any limiting options (like 'Volume Limit')

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#### Problem: Audio is out of sync with video

**Quick Fix:** - Pause and restart the video - Close other applications

**Detailed Solutions:** - Check internet speed (buffering can cause sync issues) - Download video rather than streaming - Try different browser - Restart computer - Clear browser cache

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### E. Student Device Issues (Tablets, Laptops, Chromebooks)

#### Problem: Device won't turn on

**Quick Fix (1 minute):** 1. Check if it's charged - plug it in for 5 minutes 2. Hold power button for 10-15 seconds (force restart) 3. Check charging cable and port aren't damaged

**Detailed Solutions:** - Try different charging cable and adapter - Check charging port for debris (carefully clean with dry cloth) - Leave plugged in for 30 minutes then try again - If multiple devices affected, check the charging trolley is working - Battery may be completely dead - needs longer to charge before turning on

**Prevention:** - Establish clear charging routine (students plug in at end of lesson) - Regularly check charging trolley connections - Label charging cables to avoid mix-ups - Teach students to report low battery early

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#### Problem: Touchscreen not responding

**Quick Fix:** - Restart the device - Clean the screen (fingerprints and dirt affect touch)

**Detailed Solutions:** - Remove any screen protector (may be damaged) - Check for cracks or damage - Try connecting a mouse (if problem persists, it's a hardware issue) - Factory reset as last resort (ensure data is backed up)

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#### Problem: Device is frozen / Not responding

**Quick Fix (2 minutes):** 1. Wait 30 seconds (sometimes it's just slow) 2. Close the problematic app if possible 3. Force restart: - **iPad:** Hold power and home button (or volume down on newer models) for 10 seconds - **Chromebook:** Hold power button for 10 seconds - **Windows laptop:** Hold power button for 5 seconds

**Detailed Solutions:** - Check storage space isn't full (Settings → Storage) - Close all apps and restart - Check for software updates - Scan for malware if available - Back up data and factory reset if problem persists

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#### **Problem: Chromebook keyboard not working**

**Quick Fix:** - Restart the Chromebook - Check if an external keyboard works (helps identify if it's hardware)

**Detailed Solutions:** - Check for crumbs or debris under keys - Use on-screen keyboard temporarily (Settings → Accessibility) - Try Powerwash (reset) if software issue - Report for hardware repair if keys are physically damaged

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### **F. Login & Password Problems**

#### **Problem: Student can't remember password**

**Quick Fix (1 minute):** 1. Check if there's a 'Forgot Password' link 2. Try common variations students use 3. Use class password list if available (kept securely)

**Detailed Solutions:** - Reset via email (if student has access to email) - Contact IT support for password reset - Use temporary account if available - Pair student with working device while resolving

**Prevention:** - Keep secure record of student usernames - Create password reminder system (without storing actual passwords) - Teach students to write down passwords securely - Use password manager if school policy allows - Set up security questions during first login

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#### **Problem: Account is locked**

**Quick Fix:** - Check error message (too many login attempts? expired password?) - Contact IT support

**Detailed Solutions:** - IT support will need to unlock account - Keep IT contact details readily available - Have temporary guest account available for urgent access - Assign student to work with partner while resolving

**Prevention:** - Teach students to be careful with password attempts - Regular password updates before they expire - Clear communication about password policies

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**Problem: System says password is incorrect (but student insists it's right)**

**Quick Fix:** - Check CAPS LOCK isn't on - Check NUM LOCK is correct (some passwords include numbers) - Try typing password in a visible field (like search bar) to verify

**Detailed Solutions:** - Check keyboard language settings (UK vs US layouts) - Verify username is correct (often the issue) - Look for special characters that might appear different on keyboard - Try password on different device to rule out keyboard issues

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## **G. Printing Issues**

**Problem: Printer won't print / Print job stuck**

**Quick Fix (1 minute):** 1. Check printer is turned on and has paper 2. Check for error messages on printer display 3. Cancel all print jobs and try again

**Detailed Solutions:**

**Check basics:** - Paper loaded correctly in tray - Paper isn't jammed (check all compartments) - Ink/toner isn't empty (check levels) - Printer cables connected (USB and power) - Printer is connected to network (for wireless printers)

**Clear print queue:** - **Windows:** Settings → Devices → Printers → Open print queue → Cancel all - **Mac:** System Preferences → Printers → Open print queue → Delete stuck jobs - Sometimes need to restart Print Spooler service (IT support can help)

**Reconnect printer:** - Remove and re-add printer in settings - Update printer drivers - Restart both computer and printer

**Prevention:** - Print test page weekly - Check ink/toner levels regularly - Keep spare paper loaded - Maintain printer (clean regularly) - Know IT support contact for printer issues

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**Problem: Printer is printing blank pages**

**Quick Fix:** - Check ink/toner cartridges aren't empty - Run printer cleaning cycle

**Detailed Solutions:** - Replace or shake toner cartridge - Check protective tape removed from new cartridges - Clean print heads (printer settings menu) - Check correct paper type selected - Ensure document actually has content (preview before printing)

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**Problem: Print is faded or streaky**

**Quick Fix:** - Run cleaning cycle from printer menu - Check ink/toner levels

**Detailed Solutions:** - Replace low ink/toner cartridges - Clean print heads multiple times - Check paper type matches printer settings - Replace drum unit if available - Contact IT for more serious hardware issues

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## H. Video Conferencing Problems

### Problem: Camera not working in Zoom/Teams/Meet

**Quick Fix (1 minute):** 1. Check camera isn't covered or blocked 2. Click camera icon in meeting to turn it on 3. Check permission popup (click 'Allow')

#### Detailed Solutions:

**Check permissions:** - **Windows:** Settings → Privacy → Camera → Allow apps to access -

**Mac:** System Preferences → Security & Privacy → Camera → Allow for specific app - Browser may also need permission (check address bar for camera icon)

**Check camera selection:** - In meeting settings, click camera dropdown - Select correct camera (if laptop has multiple) - Try different camera if available

**Application issues:** - Close other apps that might use camera - Restart video conferencing app - Update app to latest version - Try browser version if using desktop app (or vice versa)

**Prevention:** - Test camera before scheduled calls - Keep video conferencing software updated - Know how to access settings quickly - Have backup device ready for important meetings

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### Problem: Microphone not working

**Quick Fix (30 seconds):** 1. Check mute button (in app and on keyboard) 2. Check microphone permission popup 3. Ensure correct microphone selected in settings

#### Detailed Solutions:

**Check settings:** - **Windows:** Settings → System → Sound → Input → Select microphone -

**Mac:** System Preferences → Sound → Input → Select microphone - In conferencing app: Settings → Audio → Select correct input device

**Test microphone:** - Use built-in test in app settings - Try different microphone (external USB mic, headset) - Check volume level moves when you speak

**Common issues:** - Microphone muted in multiple places (system, app, keyboard) - Wrong input device selected - Microphone needs permission in system settings - Background noise suppression too aggressive

**Prevention:** - Use headset for better audio quality - Test before joining calls - Know keyboard shortcut for mute/unmute - Keep backup headset available

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### Problem: Echo or feedback during call

**Quick Fix:** - Mute yourself when not speaking - Turn down speaker volume - Move away from speakers

**Detailed Solutions:** - Use headphones instead of speakers (eliminates most echo) - Ensure only one person has speakers on in same room - Check microphone isn't too close to speakers - Turn off speaker on one device if using multiple - Enable echo cancellation in audio settings

**Prevention:** - Everyone uses headphones - Mute when not speaking - Don't use multiple devices in same room unmuted

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### Problem: Poor video quality / Freezing video

**Quick Fix:** - Turn off your video to improve connection - Ask others to turn off video - Close other applications and browser tabs

**Detailed Solutions:** - Check internet speed (run speed test) - Connect via ethernet instead of Wi-Fi if possible - Close background applications using internet - Lower video quality in call settings - Ask participants to mute when not speaking (audio uses bandwidth) - Schedule call for less busy network time if possible

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## I. Software & App Issues

### Problem: App won't open / Keeps crashing

**Quick Fix (1 minute):** 1. Close the app completely and reopen 2. Restart the device 3. Check for updates

**Detailed Solutions:** - Force quit the application properly - Check storage space (delete unnecessary files if full) - Update app to latest version - Clear app cache/data (Settings → Apps → Select app → Clear cache) - Uninstall and reinstall if problem persists - Check system requirements (may not be compatible)

**Prevention:** - Keep apps updated regularly - Regularly free up storage space - Don't run too many apps simultaneously - Close apps properly rather than just minimizing

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### Problem: Can't install or update an app

**Quick Fix:** - Check internet connection - Restart device and try again - Check available storage space

**Detailed Solutions:** - Free up storage (need at least 1GB free usually) - Check if app is compatible with device/OS version - Verify you have permission to install apps (IT policy) -

Try installing via different method (app store vs browser download) - Contact IT support if blocked by school policy - Check date/time settings are correct (can prevent downloads)

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### Problem: App is in wrong language

**Quick Fix:** - Look for language settings within the app - Change device language settings

**Detailed Solutions:** - **Windows:** Settings → Time & Language → Language - **Mac:** System Preferences → Language & Region - **iOS/iPad:** Settings → General → Language & Region - **Android:** Settings → System → Languages - Some apps need to be restarted after language change - Reinstall app if language persists incorrectly

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## J. Prevention & Maintenance

### Daily Routines (5 minutes)

**At the start of day:** - ☐ Turn on all classroom tech (projector, computer, speakers) - ☐ Test internet connection - ☐ Check today's lessons for tech needs - ☐ Test any videos or websites you'll use - ☐ Ensure student devices are charged

**At the end of day:** - ☐ Turn off projector properly (use remote, don't just unplug) - ☐ Ensure student devices are plugged in to charge - ☐ Close all applications on classroom computer - ☐ Lock or shut down classroom computer - ☐ Coil cables neatly (prevents damage)

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### Weekly Maintenance (10 minutes)

- ☐ Clean interactive whiteboard surface
  - ☐ Clean projector lens
  - ☐ Check all cables are secure and undamaged
  - ☐ Update software if pending updates
  - ☐ Clear computer desktop and downloads folder
  - ☐ Test all student devices
  - ☐ Check printer paper and ink levels
  - ☐ Charge any wireless devices (mice, keyboards, remotes)
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### Monthly Tasks (20 minutes)

- ☐ Deep clean all equipment (keyboards, mice, screens)
- ☐ Check for software updates
- ☐ Reorganize cables and label them

- ☐ Test backup equipment
- ☐ Review and update IT support contact information
- ☐ Check warranty/support dates for all equipment
- ☐ Report any persistent issues to IT
- ☐ Back up important classroom files

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### Essential Supplies to Keep in Classroom

**Cables & Adapters:** - Spare HDMI cable - Spare USB cables (various types) - USB-C to HDMI adapter (for modern laptops) - VGA to HDMI adapter (for older equipment) - Extension cables

**Tools:** - Microfibre cleaning cloths - Cable ties or velcro straps - Small torch (for checking connections) - Spare batteries (for remote controls) - Label maker or labels

**Backup Items:** - Spare stylus for interactive board - Spare whiteboard markers - Backup USB drive with lesson materials - Printed versions of key resources

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### Quick Reference: IT Support

**Keep this information readily available:**

**IT Support Contact:** - Email: \_\_\_\_\_ - Phone: \_\_\_\_\_ -  
Extension: \_\_\_\_\_ - Help desk location: \_\_\_\_\_

**What to include when reporting a problem:** 1. Specific equipment affected (model/room number) 2. Exact error message (screenshot if possible) 3. What you were doing when problem occurred 4. What you've already tried 5. Urgency level (affecting current lesson vs can wait)

**Emergency contacts:** - Site manager: \_\_\_\_\_ - Department head: \_\_\_\_\_  
- Cover supervisor: \_\_\_\_\_

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### Student Tech Helpers Programme

**Set up student support system:**

**Designate tech monitors (rotate weekly):** - **Connection Monitor:** Checks cables and connections - **Device Monitor:** Helps troubleshoot student device issues - **Audio Monitor:** Manages volume and speaker connections - **App Monitor:** Helps students with software problems

**Train student helpers to:** - Recognize common problems - Follow troubleshooting steps - Know when to escalate to teacher - Reset and restart devices safely - Connect and disconnect equipment properly

**Benefits:** - Faster problem resolution - Less disruption to lessons - Students learn valuable skills - Teacher can focus on teaching

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### Create Your Classroom Tech Emergency Kit

**Essential items box:** - This troubleshooting guide (printed) - IT support contact details - All remote controls (labeled) - Spare cables (labeled by type) - Cleaning supplies - Backup USB with lesson materials - Pen and paper for non-tech activities

**Digital backup:** - Cloud storage with lesson materials - Offline copies of essential resources - Student login information (secured) - Equipment manuals (PDFs) - Previous term's worksheets

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### Troubleshooting Mindset

**Stay calm and methodical:** 1. **Don't panic** - most problems have simple solutions 2. **Start simple** - check obvious things first (power, connections) 3. **Change one thing at a time** - helps identify what actually fixes it 4. **Note what works** - document solutions for next time 5. **Ask for help** - IT support is there to help you 6. **Have backup plans** - technology fails sometimes, that's normal

**Remember:** - You're not expected to be an IT expert - Every teacher faces tech problems - Students are often more understanding than we expect - Your teaching is more important than perfect technology

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### Quick Problem Finder

**No display/image** → Section C (Projector Issues) **No sound** → Section D (Audio Problems) **No internet** → Section A (Wi-Fi Issues) **Student device problems** → Section E (Device Issues) **Can't log in** → Section F (Password Problems) **Video call issues** → Section H (Video Conferencing) **App not working** → Section I (Software Issues)

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*Remember: Technology is a tool to enhance learning, not define it. When tech fails, your teaching skills and backup plans are what matter most.*

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